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Journal of the Society of Arts.

FRIDAY, FEBRUARY 26, 1858.

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TENTH ANNUAL EXHIBITION OF INVENTIONS.

Monday, the 5th of April, is fixed for the opening of the Society's Tenth Annual Exhibition of *recent* Inventions.

Persons intending to contribute to the Exhibition should communicate with the Secretary of the Society of Arts as soon as possible, stating—

1. The title of the Invention.
2. Whether the article will be a Specimen, Model, or Drawing.

Articles for exhibition must be forwarded to the Society's House, Adelphi, London, W.C., *carriage paid.*

The days for receiving articles are, Thursday, the 18th; Friday, the 19th; and Saturday, the 20th of March; and no articles can be received after the last of these days.

All articles should be accompanied with a brief but clear description of the invention, with a wood-block (when possible) for illustrating the Catalogue, and a reference to any publication in which the Invention is described.

All drawings exhibited must be framed.

No charge whatever is made for space, and the Exhibition is free.

ARTISTIC COPYRIGHT.

A Report as to the existing English Common and Statute Law, relative to this subject, has been prepared at the request of the Committee, by D. Roberton Blaine, Esq., Barrister-at-Law, Reporter to the Committee, and may be obtained of the Society's publishers, Messrs. Bell and Daldy, Fleet-street. Price Sixpence.

SPECIAL PRIZE.

A Prize of Twenty Pounds (placed at the disposal of the Council for this purpose by the Rev. F. Trench and J. MacGregor, Esq.,) and the Society's Silver Medal, is offered for a Writing-case suited for the use of Soldiers, Sailors, Emigrants, &c. The attention of those intending to compete for this prize is directed to the following points, which will influence the Council in making their award :—

Lightness,
Smallness of size,
The avoidance (if possible) of fluid ink,
Durability,
Cheapness, with a guaranteed supply, and
General applicability to the duties, habits, and requirements of the above classes.

The articles sent in for competition must be delivered at the Society's House, Adelphi, London, W.C., on or before the 8th May next.

EXAMINATION PRIZE FUND FOR 1858.

The following circular letter has been addressed to the Members of the Society :—

Society for the Encouragement of Arts, Manufactures, and Commerce, Adelphi, London, W.C., Jan. 30, 1858.

Sir,—I am instructed by the Council to inform you that the Examination Prize Fund for 1858 is now opened. The donations for 1857 were contributed by twenty-three Members, and there is a small balance to carry forward.

The Council draw attention to the fact, that last year's Examinations were limited to two centres. At these two centres, pupils from thirty-seven Institutions only presented themselves; ten of them were from the metropolitan district, London being one centre; sixteen from Yorkshire, Huddersfield being the second centre, leaving but eleven for all England, Ireland, Scotland, and Wales. This unequal distribution was one of the reasons which satisfied the Council that the system was not adapted to meet the wants of all the Institutions. They, therefore, resolved to bring the Examinations to the very doors of the Institutions, by such step of course throwing open the prize fund to the students of every Institution.

The Council have also decided on contributing a certain mileage towards the travelling expenses of those candidates who desire to receive personally and publicly their prizes, and also £5 towards the travelling expenses of each pupil, who, obtaining three of the Society's certificates of the first class in the subjects contained in the Oxford programme, is desirous to contend for the degree of Associate at the Oxford Examinations. These changes lead the Council to believe that a considerably larger sum than last year will be required for the prizes. and I am, therefore, instructed to draw the attention of all the members to the circumstances.

Donations can be remitted to Mr. Samuel Thomas Davenport, Financial Officer, Society of Arts, Adelphi, London, to whom Post-office Orders should be made payable.

I am, Sir, your obedient servant,
P. LE NEVE FOSTER, Secretary.

The following is the list of Donations up to the present date :—

T. D. Acland, Member of Council	£ 5	5
John Ames	5	5
J. G. Appold, Auditor	10	10
Harry Chester, Vice-Pres.	10	10
Henry Cole, C.B., Vice-Pres.	1	0
C. Wentworth Dilke, Vice-Pres. Chairman of Council (third donation)	10	10
Thomas Dixon	1	1
Lieut.-Col. F. Eardley Wilmot, R.A.	5	0
Lord Ebury	5	0
J. Griffith Frith, Member of Council	5	5
J. W. Gilbart, F.R.S., Treasurer (second donation)	10	10
F. Seymour Haden (annual)	2	2
William Hawksworth	1	1
Edward Highton (annual)	2	2
James Holmes (annual)	1	1
The Marquis of Lansdowne, Vice-Pres.	20	0
George Lowe, F.R.S.	1	1
The Master of the Mint, Member of Council (second donation)	10	10
Sir Thomas Phillips, Member of Council	5	5
William T. Radford	1	1
Arthur Trevelyan	1	0
T. Twining, jun., Vice-Pres.	10	10
Dr. J. Forbes Watson	1	1
G. F. Wilson, F.R.S., Member of Council (third donation)	10	10

EXAMINATIONS.

On Thursday evening, the 18th inst., a meeting was held at the Burnley Mechanics' Institution, Sir J. Kaye Shuttleworth, Bart., in the chair, at which Sir Thomas Phillips attended as a deputation, at the request of the Council of the Society of Arts, and explained the Society's system of Examinations for 1858. The Committee of the East Lancashire Union of Mechanics' Institutions will form the Local Board of Examiners for that district.

A public meeting was held at Crosby-hall, Bishopsgate-street, by permission of the Evening Classes Committee, on Friday evening, February 19th, J. J. Mechi, Esq., in the chair.

The following gentlemen, at the request of the Council, attended as a deputation:—C. Wentworth Dilke, (Chairman of the Council), Harry Chester and J. Griffith Frith (Members of the Council), with P. Le Neve Foster (Secretary), and Charles Critchett (Assistant Secretary).

The Society's scheme of Examinations for the present year was explained, and the following resolution was carried unanimously:—

Resolved,—That this meeting believes that the system of Examinations of members of Literary and Mechanics' Institutions, as carried out by the Society of Arts, is calculated greatly to promote the cause of popular education; and having been informed of the intentions of the Council with reference to the Examination for the present year, strongly urges upon the Committees and Members of Institutions in London, to co-operate with the Council of the Society in carrying out their scheme.

A vote of thanks was then passed to the chairman, and the meeting separated.

The Committee of the Devonport Mechanics' Institute met on Monday, the 22nd inst., when Mr. Henry Cole, C.B., and Dr. Lyon Playfair, C.B., attended as a deputation, at the request of the Council, to explain the Society's system of Examinations. The Committee unanimously agreed to make the necessary arrangements for the formation of a Local Board of Examiners for the counties of Devon and Cornwall.

TWELFTH ORDINARY MEETING.

Wednesday, Feb. 24, 1858.

The Twelfth Ordinary Meeting of the One Hundred and Fourth Session, was held on Wednesday, the 24th inst., George Moffatt, Esq., M.P., Vice-President, in the chair.

The following Candidates were balloted for and duly elected members of the Society:—

Clark, George T.
Grove, W. R., Q.C., F.R.S.

The following Institution has been taken into Union since the last announcement:—

456. Londonderry, Young Men's Literary Association.

The Paper read was:—

NEW ZEALAND AND ITS RESOURCES.

By William Stones.

Legendary and Traditionary History.

The early native history, as may be imagined, is entirely traditionary, the art of writing having been unknown to the New Zealanders until introduced by Europeans.

The legend of the origin of the North Island is as follows:—

Maui with his wife were in a canoe fishing, and the line, on one occasion, being pulled in with difficulty, he found that the hook had attached itself to a huge and wonderful fish; and when he had succeeded in drawing it up to the surface, he leaped from his canoe on to the newly-caught monster, exclaiming to his wife, "Whenua," (land)—thus was the North Island fished up from the ocean.

As may be supposed, cross-examination fails to elicit satisfactory answers to the questions:—Where did the tree grow out of which Maui's canoe was made, before the land was formed? Where did he get his fishing line? How had he previously subsisted? The replies being, "Don't know."

Nevertheless, the North Island has no other name than Te ika a Maui—the fish of Maui.

The Middle Island, from the circumstance of the Jade being found there, of which the choice native war weapon used by the chiefs is made, is called Te Wahi Pounamu—the place of the Pounamu.

The sea is called Te Moana, in which word we may detect an attempt to depict the sound of its well-known hollow moan, as it rolls up on to their extensive sandy beaches. The sun is supposed to go down behind the sea, and run through a hole back again at night, returning through the air during the day.

The New Zealanders deny that their forefathers were cannibals, and assert that it is only within the last few generations that the fierce spirit of war has seized them; and cannibalism arose partly from their being occasionally driven to extremities by hunger, and partly from the idea that by feeding upon the killed enemy, the eater would become possessed of the personal strength and bravery of the deceased; and revenge, payment, compensation, "utu," as it was termed, being the absorbing principle of honour, it came to pass that the friend or child of a person slain in fight would cherish the feeling for many years, until some favourable opportunity occurred, when he could avenge his friend or father's death.

One chief, in speaking of a certain district, told the writer that he knew it well. "There," said he, "we had a fight, and I ate such a chief's eyes."

"What quarrel had you with that individual, or with his tribe?"

"None, personally, but he had killed my father when I was a child."

The natives also state that the islands were once more populous than at the present time, and refer to the numerous deserted pahs, or native forts, in support of the statement, but I doubt whether New Zealand was ever much more populous than it was thirty years ago; since that time, for reasons which will be hereafter assigned, the native population has decreased. The number is variously estimated, being a mere conjecture, no attempt at a census, that I am aware of, having been made.

I should myself estimate the native population at from 80,000 to 100,000 souls.

When visited by Cook, the islands were entirely destitute of animals, except a dog and a rat; these probably being the descendants of some which absconded from the earlier ships; the people, therefore, have had no inducement to wander in search of sustenance by hunting, but have always resided in villages, building small huts of rushes, and cultivating kumeras (sweet potatoes), and, when the soil became exhausted, moving to another part of the same valley, allowing the previously cultivated portion to lie in fallow for several years. Each tribe would also plant small quantities of these vegetables, &c., in convenient little nooks near the sea-beach, or by the river side, so that in the proper fishing season the trouble of carriage might be saved.

The tribes consist of a somewhat indefinite mixture of chiefs, free men, and slaves, the last of whom were made to do the greater portion of the labour, and in battles were placed in front, the chiefs fearing they might otherwise run away, or probably avenge upon their own chiefs some pent-up grievance or offence.

The land, for the most part, is held by a kind of corporate tenure, and when sold, the veriest slave receives some share of the price, if only a piece of tobacco.

I am not aware of a single inch of ground having been discovered which was not the recognised property of an individual or of some tribe in common.

Early Relations with Europeans.

The Dutch navigator, Tasman, appears to have been the first who discovered these Islands, and the names, "New Zealand" and "Cape Maria Van Diemen," are evidences of his visit; but, beyond these mere names, few particulars are on record; nor was he aware that the land he discovered was part of an island belonging to a group.

To Captain Cook belongs the honour of definitely fixing the extent of these islands, and becoming acquainted with the inhabitants and productions; his visits are recollected with gratitude by all, and it is extremely pleasing to hear them talk of Peni Kuki (Capt. Cook), who came in the thing their fathers imagined at first was a huge bird flying on the sea—the sails being mistaken for its suitably vast wings.

To Cook they attribute the introduction of pigs, potatoes, goats, poultry, the cabbage, and the knowledge of the use of iron instruments; and throughout the land his name is mentioned with affectionate remembrance as their greatest benefactor—as one who was ever kind to them, and never took advantage of their ignorance and helplessness against his fire-arms.

I may here remark that the native name for a ship is Kai-puke—"Hill of food;" whether from the large stores they saw on board Cook's vessels, or from the advent of new supplies of food in the shape of pigs, &c., which he left with them, I know not, but it is nevertheless a fact.

Illustrative of the lasting impression which a comparatively trifling circumstance may make at the beginning of the intercourse of civilized with barbarous people, I may remark that Captain Marion, an early French navigator, having had some cause of dissatisfaction with the natives of the harbour wherein his ship was at anchor, took rather severe retribution by destroying several villages on the coast, and killing the inhabitants. He intended to inspire them with a sense of French power, and he succeeded; but, at the same time, he taught hatred, and to this day intense dislike is manifested to the Mareaus or Wiwis, the name given to the French, from their frequent utterance of the words, Oui, oui.

After the settlement of New South Wales was formed, English vessels occasionally called at New Zealand on their way home from that colony, and the account of the massacre of the crew of the *Boyd* gave to Englishmen a horrible notion of the savage character of the natives.

One old Wangaroa chief communicated to the writer his version of the occurrence, and it was thus: "On board the ship were nails, and axes, and iron articles, great prizes to us, and some of our people took them. We now know how wrong you consider it to steal, but we did not understand then; our people saw the iron articles in abundance; they wanted the nails, &c., and took them. The captain purposing (as I now suppose) to intimidate us, seized two of our chiefs and chained them on board. You are now aware that our chiefs are sacred in our eyes, and, as we could not allow them to suffer these indignities, and, moreover, thought the Captain intended to kill them, we resolved to murder the English and release our chiefs,—it was a sad mistake, from kuwaretanga (ignorance) on both sides."

Whaling vessels frequenting the Pacific began to call, in order to obtain water, and such fresh provisions as pigs, potatoes, pumpkins, &c., so desirable and necessary in their long cruises; and the Bay of Islands being a well-sheltered harbour, and easy of access, became the favourite place of resort, until at last two hundred vessels have been known to visit the Bay in one year.

Guns, powder, blankets, clothing of all kinds, and ardent spirits, were thus introduced, and the Bay natives became rich in European goods; unhappily, demoralization resulted from this abundant intercourse with English vessels, and with the good came much evil.

Diseases previously unknown were introduced, and the sad effects of intoxicating habits were too common. Moreover, in a moist climate, it must be apparent that exposure to wet is calculated to induce certain classes of diseases. Before the introduction of European clothes they were accustomed, when wet, to throw off every garment and dry themselves, but since that period, in spite of every warning, the natives, when thoroughly drenched, will stand over the fires in their huts until perfectly dry: hence the frequency of pulmonary complaints amongst them, and, from the causes named, a decrease of population.

Irregular Settlement.

Captains and mates of whalers and trading vessels from New South Wales, who had been to the place for supplies, particularly in seasons of drought in the Australian colony, became enamoured with the wild romantic freedom of the land contrasted with the stringent formal regulations of the convict colony; there was a charm connected with the idea of being regarded as a little king amongst a tribe; there was mildness of climate, surpassing beauty of scenery, and noble rivers sweeping through thickly-timbered forests, interspersed with lovely fern valleys, whose rich soil, unvisited by drought, brought forth abundantly.

Seamen also thought it would be an easy, merry life, to dwell where tobacco and grog were untaxed and enticingly cheap, being easily obtainable in any quantity, by top-sawing if an experienced hand, and bottom-sawing until he had learnt the mystery.

Thus the one class, retiring masters of vessels, opened stores, where the natives obtained whatever European articles they desired, for which they exchanged agricultural produce; and from these storekeepers, shipmasters visiting the Bay procured provisions and other stores of which they might be in need; the other class, the seamen, set up grog shops for the accommodation of Jack ashore, and so Kororareka became a little British town.

Others located themselves near to the native villages, a proceeding always encouraged by the chiefs, because they reasoned that wherever a white man went, thither would follow white men's goods, and to obtain these was their great anxiety. The foreign trade, if I may so term it, they left to the superior arrangements of the Europeans, but every tribe was particularly anxious to secure the near residence of a pakeha, or white man, for the reason stated. Hence they readily parted with plots of land for the white man's house and farm; in the first instance no cause existed to limit his purchases, for there was abundance for all, and, as may be supposed, the payments for land were not large; and what was it worth thirty years ago? Moreover, the settlers who first purchased land in New Zealand had come from the colony of New South Wales or Van Diemen's Land, where the land was then being given away by the Government; consequently their idea of the value of land was not very excessive. The settlers agreed to pay whatever the natives demanded;—it was unoccupied; and just as a Canadian clearing increases the value of the adjacent lands, so the presence of an European increased the value of the property unsold, for he opened a near market for its produce.

Verily, the sweeping accusation as to land-jobbing comes with an ill-grace from Government, who at the very moment when these properties were being bought, were giving away land in other colonies, and who, as I shall subsequently show, have since proposed to assume the proprietorship of those very unoccupied lands without any payment at all.

As whales were observed to frequent the coasts of New Zealand, the merchants of New South Wales established whaling stations in the neighbourhood of Cook's and Foveaux's Straits, and in those bays to which the whales were noticed to resort. Thus, a large shore population became temporarily located at various points.

That worthy, eccentric clergyman, the Rev. S. Marsden, whose name will pass down the stream of time with the early history of New South Wales, planned a mission to New Zealand, which he personally visited to found, and by degrees the Church Missionary influence became great, and their establishments at Paihia, on the Bay of Islands, and at the Waimate, the latter midway between the Bay and Hokianga, led to the introduction, cultivation, and extensive growth of the vine, water-melons, peaches, apples, and various vegetables; and, by the same means, cattle and horses, goats, sheep, and fowls, ducks and geese, became more generally known to and largely acquired by the natives, and, from the genial character of the climate, thrived amazingly.

A notable character in the early history of New Zealand, the Baron de Thierry, now appears on the stage. He states that he gave a Church of England clergyman a large sum of money, many years ago, to purchase land in New Zealand, and that from this agent he received deeds, setting forth the boundaries of a large district, therein represented to have been sold to the Baron by the natives.

Some years after this purchase, the very idea of which the natives ignore (the only instance of such a denial), the Baron, who had been residing in the Marquesas Islands, of one of which he assumed the title of king, but from disagreement with his subjects, thought it advisable to retire to Sydney, announced his intention of visiting New Zealand, to take possession of his land.

Accompanied by some sixty followers, be sailed from Sydney in a small vessel, and landed on the shores of the Hokianga, of which district he claimed to be the sovereign chief. The long-expected French men-of-war, to support his authority, not making their appearance, and his staff dwindling away as his means became exhausted, Charles, Baron de Thierry in France, King of Nukuhiva, Marquesas, and Sovereign Chief of Hokianga, New Zealand, whose advent had caused much commotion, ceased to—

> "Fright the isle from its propriety."

In the year 1839, the New Zealand Company sent out their first ship, the *Tory*, under the direction of Colonel Wakefield, to purchase land, &c. He visited successively Hokianga, where the Company had purchased one or two small properties; Kaipara, where the natives refused to sell any land at all; and then sailed southward, where he effected a large purchase of land on the shores of Cook's Straits, and formed the present settlement of Wellington.

All these various interests (each party being perfectly independent, and owing no allegiance to the others), being thus located in the land, it requires but little consideration to foresee that unpleasant complications would follow. Collisions between native tribes, between natives and Europeans, and amongst Europeans themselves, were already threatening, and would doubtless have soon taken large dimensions, but for the authoritative colonization by the government. I will name but one or two circumstances in proof of the disorganization which existed.

It was a customary matter, and quite expected, that several men of every crew would abscond, leaving the ship so short of hands that the commander could not put to sea when laden. When a ship had taken her cargo on board, the haunts of the runaways being ascertained by native information, two or three captains with their officers would assemble, well-armed, and joining their forces and taking the law into their own hands, would, unexpectedly, at night, visit the houses of the sawyers with whom these runaways generally found a hiding place, and threaten that unless the men were delivered up, the house should be broken into (which was sometimes done), and as many of the men as could thus be recovered were brought back to the ship, and as soon as sufficient were obtained to enable the vessel to go to sea with the slightest degree of safety, the commander would get away with all speed.

Frequently, when half-way from the colony of New South Wales, an escaped, starving, convict, would be found in the hold of a vessel, determined at all risks to make his way to that traditional Paradise of the condemned, New Zealand. What was a captain to do? It would only have been troublesome and expensive to have kept these men until they could have been thanklessly delivered to the authorities in England, and to put back would not be profitable, so they were generally made to work during the passage, and part of the time in port; they then disappeared by the aid of the sawyers, some of whom were always ready to lend their friendly assistance for such an escape.

The writer observed one morning a party of forty armed Europeans rowing up the Hokianga, and while wondering as to the object of the expedition, noticed them deliberately break into a timber dock, and steal therefrom timber logs and spars to the value of more than £200, for which atrocity no redress, no investigation by the government, could ever be obtained.

I think we may fairly term this the period of "irregular settlement," when every one did as he liked in his own eyes.

The distribution of letters was on rather an unique principle. The only recognised Postmaster was a merchant at the Bay of Islands, and his was an altogether honorary position. Whenever, on the arrival of a vessel, he found on opening the bag that there were several letters for any district within one or two day's journey, he would enclose them to the principal resident or missionary, who would pay the native bearer, generally with a striped shirt and some tobacco; and the letters being arranged in a row on the mantel-shelf, the addresses would be accessible for the perusal of all chance visitors. Any one happening to call, would say, I am going near to such a person, and will take his letters; thus by slow filtrations did letters and newspapers reach their destination. The writer had one letter delivered to him two years and a week old.

GOVERNMENT COLONIZATION.

To put an end to the anomalous condition of matters we have referred to, the British Government resolved to establish a Crown colony, and to Captain Hobson, who had previously visited New Zealand as commander of one of Her Majesty's ships, was entrusted the delicate mission of treating with the native chiefs for the cession of that independence which had been acknowledged by Great Britain, in consequence of a representation made by some chiefs who in 1835 had entered into a confederacy by and with the advice and consent of Her Majesty's resident.

Captain Hobson arrived in the Bay of Islands in January, 1840, and immediately issued three proclamations, with only one of which are we at present concerned.

After the preamble, the proclamation in question goes on to say, "Her Majesty does not deem it expedient to recognize any titles to land in New Zealand, which are not derived from or confirmed by Her Majesty; but, in order to dispel any apprehension that it is intended to dispossess the owners of any land acquired on equitable conditions, &c., a commission shall be appointed to inquire into and report on all claims to such lands."

The agreement known as the Waitangi Treaty was subsequently entered into, its principal points being the recognition by the English Government of the "full, exclusive, and undisturbed possession of their lands and estates, forests, fisheries, and other properties which the natives may collectively or individually possess;" on the other hand, the natives ceded to Her Majesty "all the rights and powers of sovereignty over their territories," and became British subjects.

From this period the difficulties of the unfortunate emigrants commenced. Rich men seldom emigrate. The emigrant classes are persons of no means at all, or persons of small resources, who leave their native land to improve their circumstances.

Picture to yourselves the condition of these wanderers, to whom a parental Government assumed this position—You shall not buy land from the native owners; that privilege we reserve to ourselves. You cannot buy from the white population or from the New Zealand Company with safety, because their titles may not eventually prove sound, according to our views. And as we, the Government, have as yet no land of our own, you must wait until we have purchased from the natives and are in a position to sell. Hence neither old settlers nor new comers were encouraged to commence working the land, for, after the examination of the titles, their labour might prove to have been in vain; they, therefore, passed their time in restless, anxious, expectation, their energies paralysed, their small substance dwindling, until at length, owing chiefly to these absurd regulations, the colony became so distressed that Government debentures were issued for such paltry sums as 10s. and 5s. Surely we need no other proof of the low ebb to which the colony had become reduced.

When the Government was at length in a position to offer land, it was put up in small quantities to auction, on which occasions the officials and a few speculators did much injury to the lasting interests of the colony. True, by this system the price realised was high, and the amount paid into the Government coffers comparatively large, but this was at the expense of a serious diminution of the means of the poorer settlers, who, when they had acquired their dear land, could only send their produce to the same market as the natives, whose land had cost them nothing.

The policy of extracting as much as possible from the newly arrived, for their small plots of land, and leaving them without capital to work with, was suicidal, as the result too sadly proved. Some left the country, but, with the pertinacity of Englishmen, many remained in the land of their adoption, hoping for brighter days. They exported wood, oil, salt pork, maize, and corn to Sydney, and spars for masts (ordinary house timber not paying the high freight), as well as wool and gum to England, and thus raised a credit for themselves.

At length the gold fever broke out in Australia, where agricultural operations were for a time comparatively neglected. Then New Zealand developed its amazing productive powers, and wheat, maize, potatoes, and timber were largely exported to the Australian colonies.

In addition, the colonists turned their earnest attention to breeding sheep, and New Zealand wool is now becoming a large article of export to England, and this antipodal Britain, like its mother, will build its early foundations on the woolsack.

CLIMATE.

The climate of New Zealand is, on the whole, I believe, superior to all others in the world, perhaps I may rank Van Diemen's Land as its equal, for admitting, what I suppose will not be denied, that a moderate temperature is of vast importance in the acquisition and preservation of health; surely, if the maximum and minimum of such moderate temperature are arrived at by slow gradual changes, we have in that circumstance the most favourable element of health so far as the atmosphere is concerned in securing that great blessing.

Some of the southern countries of Europe have a mean annual temperature equally as high as New Zealand, but there is this important fact to be borne in mind, that whereas in the south of Europe the heat in summer prevents out-door labour during several hours of the day, and the winters are comparatively cold, in New Zealand the difference of temperature between the winter and summer months is very limited. Thus the mean temperature of the hottest month of the year in Auckland is 67½ deg., and of the coldest month 51½ deg. In London the mean of the hottest month is 64 deg., and the coldest 37 deg.,—in the one case a difference of 16 deg., in the other of 27 deg. These differences will be more apparent from the following comparative tables:—

MEAN TEMPERATURE.

	Annual.	Winter.	Spring.	Summer.	Autumn.
London	50·39	39·12	48·76	62·32	51·35
Auckland	58·43	50·68	56·82	66·38	59·82
Naples	61·40	48·50	58·50	70·83	64·50

MONTHLY MEAN TEMPERATURE (FROM OTHER OBSERVATIONS).

	In London.		In Auckland.
January............	36·3	July	49·5
February	39·6	August	54·3
March	42·	September.........	54·8
April	47·6	October	58·6
May	55·4	November.........	58·8
June	59·3	December	64·6
July	62·9	January............	69·3
August	62·9	February	67·0
September	57·7	March	65·1
October............	50·8	April	59·
November.........	42·4	May	56·1
December	38·7	June	52·1
	49·6		59·1

Doubtless, this equality of temperature is in a great measure owing to the insular character of the colony.

The heat of the sun no sooner raises the temperature of the land, and, in consequence, that of the superincumbent air, than the air on the surface of the land rises, and the air from the sea rushes in to supply its place; thus, a refreshing sea breeze is experienced from morning until afternoon or evening, when the land breeze commences, and generally lasts through the night, until a short time after sunrise.

Northerly winds are damp, being charged with moisture; southerly winds bring dry weather.

New Zealand is remarkably free from diseases, complaints of the eye being the only exception, and of this class there are more frequent cases than in England.

Another remarkable peculiarity consequent upon its climate is the fact, that potatoes and maize flourish side by side in New Zealand, contrary to the ordinary condition of vegetation in Europe, where maize will not ripen in the same circumstances as enable potatoes to become perfect. In our own country, for instance, maize has not been, and therefore, I presume, cannot be successfully cultivated, and potatoes are largely grown. In the south of Europe the potato ceases to be generally cultivated, but maize flourishes.

From Van Diemen's Land potatoes are largely exported to the other colonies of Australia, to Sydney particularly, but maize itself is uncertain. On the other hand, maize is extensively cultivated, and with certainty in New South Wales, making excellent food for horses, poultry, and pigs, but potatoes do not succeed so well. In New Zealand they are much prized by the natives, who have large plantations of both vegetables, and a cob of young corn slightly roasted, or boiled and served with butter, is a dish not to be despised.

Physical Geography.

New Zealand is situated about 1,200 miles to the eastward of the great Australian continent, and consists of three principal islands, the North, Middle, and South Island, with several smaller islets; the extreme length being about 1,000 miles, and the width varying from a few miles to 250 miles.

A range of lofty mountains extends throughout the length of both the North and Middle islands, projecting occasional spurs out to the coast, thus giving rise to every variety of scenery; rivers, mountains, and valleys, dense forests and fern plains, silvery beaches, and bold bluffs. The summits of some of these mountains are crowned with perpetual snow, as Mount Egmont in the North island, which rises about 8,600 feet above the sea level; and there are several quite as high in the Middle island.

New Zealand may be properly termed a volcanic country, many of the principal mountains being extinct volcanoes. From Wangaroa, which bears strong marks of volcanic action, passing onwards through the neighbourhood of the Bay of Islands, we come to Auckland, which is situated at the base of an ancient volcano, Mount Eden, the lava or scoria from which is employed as metal for the roads, and as a building material. Starting again from White or Sulphur Island and Whale Island, which are still in action, we pass on to Lake Rotorua, and through the country to Lake Taupo, and thence to Wellington; mud-pools, sulphur and boiling springs abound, and by exposure in some of these, articles may be rapidly silicified.

This part of New Zealand (the province of Wellington) has also been recently subjected to the shocks of two earthquakes; one in October, 1848, and the second in January, 1855, when the ships in the harbour of Wellington appeared to those on board as though grating over a rough bottom, and the houses swayed to and fro; however, as few brick-built houses had been erected since the disastrous earthquake in 1848, less damage was done than might have been expected. Other parts of the colony were but slightly affected, and the shock was not felt at all in the province of Auckland.

No country of the same extent as the colony of New Zealand possesses an equal, or in any way approaching, amount of water-communication; a glance at the map will suffice to show this fact.

If we commence at the northern point, there is the Hokianga, with its six or seven streamlets running 40 miles up into the country, and navigable 25 miles for ships of 800 or 900 tons. This is a thickly-timbered district.

The Kaipara estuary, into which four rivers discharge their waters—the Wairoa, Otamatea, Oruawhara, and Kaipara—also heavily timbered.

The Manukau, into which a better channel has recently been discovered, and, from its proximity to Auckland, promising from its position to be the metropolitan port for the west coast.

The Waikato River, a beautiful stream running through a very fertile district, almost to the great lake Taupo.

Below this is Kawhia, navigable for vessels of 200 tons; and still more to the south is the small stream Wai-te-ra and the romantic Wanganui, at the mouth of which is Petre.

The noble Wanganui, whose origin is at Tongariro, 10,000 feet high, flows in many places through volcanic fissures several hundred feet in perpendicular height.

Next is Port Nicholson, on which stands Wellington, the river Hutt emptying itself into this arm of the sea; and at the head of Palliser's Bay is the fine valley of the Wairarapa, well suited for grazing.

On the east coast is Wangaroa, the scene of the Boyd massacre, the fine harbour of the Bay of Islands, the gulf of the Thames, and various other inlets, giving access to large districts in the interior.

If we turn to the Middle Island, we shall find that numerous rivers intersect the country, although not in the same way, or to the same extent, as in the North Island. The rivers of the Middle Island appear to be more subject to freshes than those in the North Island; the torrents rushing down from the New Zealand Alps, suddenly raise the waters of the streams in the plain, and the water course which may have been easily fordable in the morning, is an impassable gulf at night.

On the deep inlet called by Captain Cook Blind Bay, is the settlement of Nelson, and in the same province, at the head of Cloudy Bay, the fertile valley of the Wairau, the scene of the unfortunate massacre of Europeans which occurred at the early period of the settlement.

Below this, we have the Canterbury plains, and now we get into the more strictly pasture districts of the colony.

The plains of Otako are well-watered by small rivers, giving great facilities of communication and carriage. The province is named from the principal harbour, Otako, an arm of the sea, at the head of which stands Dunedin, the capital.

The southern plains, near Dunedin, afford extensive pasture ranges, which are reached by means of the Molyneux river. The New river, accessible to vessels of 400 tons, opens out a valuable country, and Bluff Harbour is safe for vessels of any tonnage.

The harbours on the west coast, although capable of receiving ships of the heaviest burden, yet from their possessing little available land, and being on the weather side of the island, have hitherto not been much frequented.

I may here notice that nearly if not all the rivers on the western side of these islands have bars at their entrances; hence you will observe that all the European colonists select the east side, which is the lee side of the islands. New Plymouth is an exception, but even its magnificent soil does not cause it to rise rapidly. Attention may also be called, in this place, to the singular circumstance that as we advance from the north to the south, the population diminishes in number, the inhabitants of the North Island being twenty to one on the Middle Island; we also lose that dense forest character which so distinguishes the north. In the North so abundant is timber, that the natives are quite dainty in their selection of firewood, rejecting all but those sorts which experience has taught them are the best for making a pleasant, easily burning fire, whereas in many parts of the Middle Island, in the Canterbury province, for example, so scarce is timber, that the fencing is made by ditch and bank, with a rail at the top sometimes, and it is necessary to grow a plantation as a shelter for gardens and orchards. In a letter from Christchurch, dated October, 1857, I find this statement, "There is not a single tree growing naturally on the plains to be seen, and the high mountain ranges around us are barren."

And although the Struthious genera of birds cannot be said to abound in the North Island, yet they are not difficult to obtain in various parts, but the great denizen of the Middle Island, the Moa, has entirely disappeared. Moreover, the Kauri resin is found on the surface of the ground, at a distance of 500 miles from the district where the tree itself now grows.

Lieut.-Governor Eyre also reports that on a steep high hill on the Middle Island, where now nothing but mosses and lichens grow, were the charred remains of large Totara trees, evidently showing that the ground had once been low and covered with forest.

All these facts point to the probability of some great rising of the Middle Island having taken place within a comparatively recent geological period, and Maui's web of fiction may contain a silver thread of truth.

Animal Productions.

Of the produce of the animal kingdom, I may notice whalebone, and oil—both black and sperm, which for many years formed the most valuable articles of export.

Seal skins and oil also contributed to the export trade of New Zealand, but have now almost entirely ceased.

One peculiarity of New Zealand, I have already observed, was the almost entire absence of land quadrupeds when it was first discovered; all animals have been of European introduction.

Of the native birds, although they abound, a very slight notice must suffice, for they afford no article of export; but one or two species are too singular to be passed over in silence. I allude to the extremely curious *Apteryx Australis*, or Kiwi, which is about the size of a common fowl, with undeveloped wings; a ground bird, nocturnal in its habits, it is perhaps the only bird which is so favoured by the chiefs as to be fairly termed game, all other birds being common. The feathers are highly esteemed for making choice dresses. The other is the Moa, or *Dinornis* of Owen, which was probably the largest bird ever existent on this earth, and stood 16 feet high. The latter is now extinct; the former, although rare, is procurable in several parts of the country. I understand that a Moa's egg has just been found; it is stated to be a foot long, nine inches in diameter, and 27 inches in circumference.*

In passing, I would remark that a moderately good shot need not fear the failure of supplies when travelling, fine large wood pigeons abounding in all the forests, and wild ducks in the rivers; wild pigs are met with in many districts, and in some parts wild goats.

The haliotis iris, mutton fish, is prized by the natives, altough tough eating; the shells are used in constructing the native fish-hooks, and large quantities are brought to England, where the iridescent pearly linings are employed in inlaying papier maché goods.

The growth of wool has, for several years past, been much attended to by the settlers, and New Zealand wool is gradually becoming a valuable article of export. The New Zealand wool brought into the English market in 1857 amounted to 8,325 bales.

One friend of mine wrote to me some time back, saying, " I have recently had a long walking journey, about 270 miles, from Banks' Peninsula (whither I had gone in a schooner) home again to the neighbourhood of Otako. The journey was laborious. During the tour I passed along one of the most extensive grass plains in New Zealand. I suppose, from all I can learn, it is about 250 miles long and 30 miles wide; not a tree to be seen for 50 miles, except the Ti tree. I walked about 150 miles along it, and had to depend upon drift wood for fuel. The country in this neighbourhood is mountainous; the land is principally grass; very little fern." In the North island, which is much more heavily timbered, the cleared lands have been devoted to the growth of cereals rather than to the feeding of sheep, but, in a letter of the 30th September, 1857, I find Ahuriri reported to be the finest of all the sheep districts of the colony, and that the people are wealthy, and their profits every year increasing with the growth of their flocks.

As a very large portion of the produce of New Zealand is sent to Sydney, either for Australian consumption, or *en route* for England, this filtration of its exports through another market before reaching England prevents our having a clear idea of the extent of its capabilities.

I may observe that in those districts which abound in fern, and are not, therefore, so suitable for sheep farming, large pig runs would form profitable sources of income to the farmers, no food producing finer grained meat than fern root, which, moreover, has this advantage, that it does not require any care in the cultivation.

At one time New Zealand pork was in low repute in New South Wales, as being gross and rank. This was, no doubt, owing to the circumstance that the principal portion of the salted pork sent thither came from the whaling stations on the coast, where the animals had been fattened on whale refuse, but fern fed pork is deliciously sweet.

Large numbers of cattle are being imported for stock, and already New Zealand hides are beginning to appear in the English market.

Vegetable Productions.

New Zealand possesses several ornamental woods, very suitable for cabinet makers' use, but probably the freight to England is prohibitory of their employment here; there are also some excellent timber trees for shipbuilding, such as the Puriri, a durable, hard wood, well adapted for knees. Of sixteen specimens sent to Sydney and experimented upon by Captain Ward, of the Royal Engineers, only one was lower in the breaking strain than English elm, fifteen were superior to that timber, several were nearly equal to the best English oak, and two ranked considerably above that wood; one is reported to be represented by a strain of 3001, superior English oak standing at 2037 to 2261 by the same formula.

The forests in the North Island furnish housebuilding timber of various sorts; amongst these the Kauri pine, whose habitât is now the north part of the North Island, although there is no doubt that it once existed in the southern regions. The freight precludes its being profitably brought to this country for housebuilding purposes, otherwise its fine grain, smooth working, and freedom from knots, would soon cause it to take a high position. Its value for ships' masts and bowsprits has long been recognised by the British Government, and many cargoes have been imported; beautiful arrow-like specimens, from 70 to 100 feet in length, tapering from 36 to 40 inches square at the butt to 18 inches square at the head' are not unfrequent, and pieces 50 and 60 feet and upwards in length, without knots, are quite common, and shorter massive bowsprit pieces are easily procurable.

The Kaipara and Hokianga on the west coast, Mercury Bay, the Thames and Wangaroa Harbours on the east coast, are the places in most repute for spars.

From the pine exudes a resin, known as Kauri gum, of which very large quantities are exported yearly. When it first oozes from the tree it is transparent, or at most milky, but exposure to the atmosphere imparts a yellow hue. This resin is not only obtained from the present forests, but is dug from ground where the trees from which it flowed have long ceased to exist. It is used in America in lieu of copal varnish. In this country, I believe, it is chiefly employed as a glaze for calico. The price in England varies much, having been as low as 15s. or 16s., and as high as 80s. per cwt.

All cereals thrive well in New Zealand, and large quantities of wheat and maize are annually produced and exported to the Australian colonies.

Our ordinary fruit trees furnish their ample stores to the southern cultivator, and as we advance northwards, delicious water melons, Cape gooseberries, figs and oranges thrive in the open air, for there an ever-fresh verdure prevails, and the last year's leaves, in a green old age, gradually retire in spring before their more vigorous successors. Some French settlers at Akaroa, in Bank's Peninsula, Middle Island, are cultivating the vine successfully, and in the North Island many varieties have been introduced, principally through the agency of Mr. Busby, who devoted much time and took great interest in the subject. Potatoes and kumeras (a sweet potato, which is at first rather mawkish to the European taste, but in a short time becomes pleasant, and a favourite vegetable) are the staple articles of native food, and these are grown in vast quantities for sale, and shiploads of potatoes in the season are forwarded to Port Phillip and Sydney. It has already been noticed that the maize and potato flourish side by side in this antipodal Britain.

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* The shell is the 16th part of an inch thick. A hole is drilled in the end of it, and the egg must evidently have been considered of great value, as it was found deposited at the head of a skeleton, with a large number of Pounamu axes.

The Phormium tenax (New Zealand flax) is a hardy plant, belonging to the natural order of lilyworts; and although popularly termed flax, the plant from which it is obtained differs entirely, and in almost every respect, except that it is a plant, from the European flax and hemp. The following Table, showing the botanical differences, may render this statement more plain:—

	Class.	Order.	
European flax...	Exogens ...	1*	Fibre from the stem of the plant.
„ hemp	Exogens ...	2†	Fibre from the stem of the plant.
New Zealand flax	Endogens ...	3‡	Fibre from the leaf of the plant.

There are several varieties, some yielding finer, others coarser fibres, and but little care has hitherto been given to the selection of the most suitable for manufacturing purposes in England, but if the difficulties of preparing large quantities could once be overcome, and attention drawn to the necessity and advantage of selection, the cultivation of the superior kinds only would be encouraged.

Warmth and moisture appear to be the principal requisites for its flourishing. In New Zealand it grows on the hills and in the valleys, but seems to thrive best in the latter situation.

In the *Gardener's Chronicle* of the 12th December 1857, Mr. Saunders, of Jersey, states that he has a plant of the *Phormium tenax* which, in 1855, produced one flower stem 10 feet long; in 1856, ten flower stems averaging the same length, and in 1857, seven flower stems of the same length, the diminution owing to deductions having been made from it for the purposes of propagation. The position was moist, and exposed, with a westerly aspect. "The leaves," he says, "vary from five to eight feet in length, and we sometimes strip them off and make use of them as tyes, which are particularly tough and strong. If these leaves are kept for two or three years, they may at any time be made pliable by steeping in water, and made as useful as if they had been taken from the plant but a few days."

The New Zealanders use it green in strips for tying and joining in every shape, the article being a convenient substitute for nails, string, pins, and all connecting implements, and in its green state it is also used largely for plaiting baskets to hold potatoes, and cooked food is generally presented to chiefs and visitors in new flax baskets, about the size of a mechanics' paper cap. When prepared it is used in the manufacture of all kinds of garments, in the making of lines for fishing, ornamental baskets for small wares, and floor mats. It is sometimes dyed of various colours to confer additional beauty on the articles into which it is manufactured.

The native mode of separating the fibres from the dense mass of fleshy parenchymatous matter in which they are embedded is by means of a cockle-shell, and by a gentle pressure the shell is repeatedly drawn or combed along the leaf, and gradually the fibres appear in long and beautiful delicate silky threads. Doubtless, this is not an economical mode of preparation, a large per centage of really valuable fibre being combed away and discarded, but no European mode of proceeding has hitherto been found to accomplish the object so successfully.

I may explain that the old careful preparation of flax by the natives is almost dying out; they can obtain European good clothing at so cheap a rate, and their time can be employed to so much greater advantage in other pursuits. Several European plans have been tried, but none as yet have been attended with any marked success.

A friend of mine, writing from Auckland, on the 30th September last, says, "I am afraid nothing will come of Whytlaw's flax. Five tons in six months will not pay his staff of men and boys, but I think we shall have some flax ere long to export;" and then he refers me to some specimens prepared by the Baron de Thierry's process of steaming.

Another Auckland resident, Mr. Cox, appears to have been trying his skill in preparing the flax for manufacture and exportation. It is stated that the machine is very simple, being based on the principle of the carding machine. A subscription was at once started to cover the expense of preparing five tons of flax for shipment to England; it is also stated that the natives present at the trial of the machine wanted to purchase it on the spot. On this occasion, the motive power was by hand-labour, but even this showed a result of 3 cwt. per frame or machine per day, and with steam power there would be nothing to prevent a hundred frames or machines being set at work under one roof. This experiment was made in the presence of several of the most influential colonists, who, on the same occasion, entered into a subscription for defraying the expenses of a public trial of the Baron de Thierry's mode of preparing flax. I also learn by recent news from Auckland, that nearly £1,500 has been subscribed towards the formation of a flax company.

So important has this question been deemed by the Colonial Government of New Zealand, that it notified on the 20th Dec., 1856, that the following rewards would be paid for certain inventions or improvements connected with this article,* viz.:—

£2,000 to the person who shall, by some process of his own invention, first produce from the Phormium Tenax, or other fibrous plant indigenous to New Zealand, 100 tons of merchandize.

£1,000 to any person, other than the person entitled to the first reward, who shall by some process of his own invention, next produce from the Phormium Tenax, or other plant indigenous to New Zealand, 100 tons of merchandize.

£1,000, viz., £200 to each of the first five persons, other than those entitled to the first and second rewards, who shall by any process, whether his own invention or not, produce from the Phormium Tenax, or other fibrous plant indigenous to New Zealand, 25 tons of merchandize.

Half the reward to be paid upon the Governor being satisfied that the applicant is entitled to the same, and the other half on proof of the *bonâ fide* sale of the merchandize in Europe, at an advance of 20 per cent. on the actual cost of the article landed in Europe. Every claim for reward to be preferred before the 1st January, 1859.

The importance of this subject to the mother country will be apparent, from a consideration of the immense quantities of flax and hemp imported yearly into England. These were—

Flax, dressed and undressed.

Quantity in 1855.	Value in 1855.	Quantity in 1856.	Value in 1856.
1,293,435 cwts.	£3,317,122	1,687,041 cwts.	£3,627,507

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* 1. European flax (Hypogynous exogens), geranial alliance. Symmetrical flowers; styles distinct; seeds with little or no albumen.

† 2. European hemp (Diclinous exogens), urtical alliance. No albumen; unsexual.

‡ 3. New Zealand flax (Endogens), lily alliance. Styles consolidated; hypogynous, bisexual, hexapetaloid; copious albumen.

* See *Journal*, Vol. V., p. 328., and Vol. VI., p. 137.

Hemp, undressed.

Quantity in 1855.	Value in 1855.	Quantity in 1856.	Value in 1856.
1,276,678 cwts.	£1,918,816	1,504,726 cwts.	£1,935,873

And yet one of our own colonies porduces an inexhaustible supply of an article which, according to Dr. Lindley, is stronger than those so largely consumed materials, the comparative strength of various fibres being thus stated by him:—

Silk	34
New Zealand Flax	23⅘
European Hemp	16⅓
European Flax	11¾

I must add that, although the flax is admitted to be exceedingly strong in the straight pull, it is stated to cut in the tie; whether this arises from a serrated edge of the fibre, or from a brittleness produced by the presence of the gum and chemical salts, as phosphate of lime, &c., which the flax naturally contains, further experiments can alone determine. Certainly the flax imported during the last 15 years cannot be regarded as fairly representing what the article is, so rough and unprepared have been most of the specimens I have seen.

The plant contains a curious gum, of which I had a sample sent over for the purposes of experiment, but so anxious were our customs officers to ascertain whether it contained a liquid liable to duty, that the bottle was broken in the process of ascertaining the point, and the contents spoiled.

Minerals.

Coal.—This valuable substance has been found cropping out in various parts of the country, in some of the southern ports of the North Island, also in the provinces of Nelson and Canterbury. It is being worked on the surface, I understand, but the quality is not, so far as I can learn, of any very great excellence.

Copper.—A considerable quantity of copper ore has, at various times, been imported from New Zealand, principally by way of Sydney, obtained from the Great Barrier Island. I believe the works are not being carried on, whether from the yield not being satisfactory to the proprietors, or from any other cause, I am not aware.

The Dun Mountain Company propose mining in the province of Nelson. Two tons of ore extracted from the lodes they propose to work, were dressed for market at Swansea. This parcel is stated to have yielded, after dressing, 23⅞ per cent. of fine copper, and the refuse dust produced 6¾ to 13⅝ per ton of ore, which consists of a grey sulphuret, with red and black oxyde and native copper, and strong yellow sulphuret. A staff of miners, with suitable implements for carrying on the works, have been despatched to Nelson, and, by this time, are expected to be at work.

Gold.—The sudden elevated position taken by Victoria on the fact of its gold fields becoming known, naturally led the neighbouring colonies to look at home, and, if I may so say, "sweep diligently the house." In Van Diemen's Land gold was discovered, although not in sufficiently remunerative quantity, and New Zealand soon proved that it also possessed the precious metal.

The Coromandel Harbour was the first district which the colonists ascertained to contain gold, but, although a large reward was offered by the Auckland merchants for proof of its affording a reasonable compensation to diggers, the necessary evidence to secure the reward was never forthcoming. The province of Nelson, however, in this matter, as in the case of copper, seems likely to claim the palm. Already 2,000 diggers are diligently at work devoting themselves to the search for gold, and have agreed to regulations amongst themselves. Their search appears so satisfactory that many are leaving the other provinces to join in the gold hunt.

Division into Provinces.

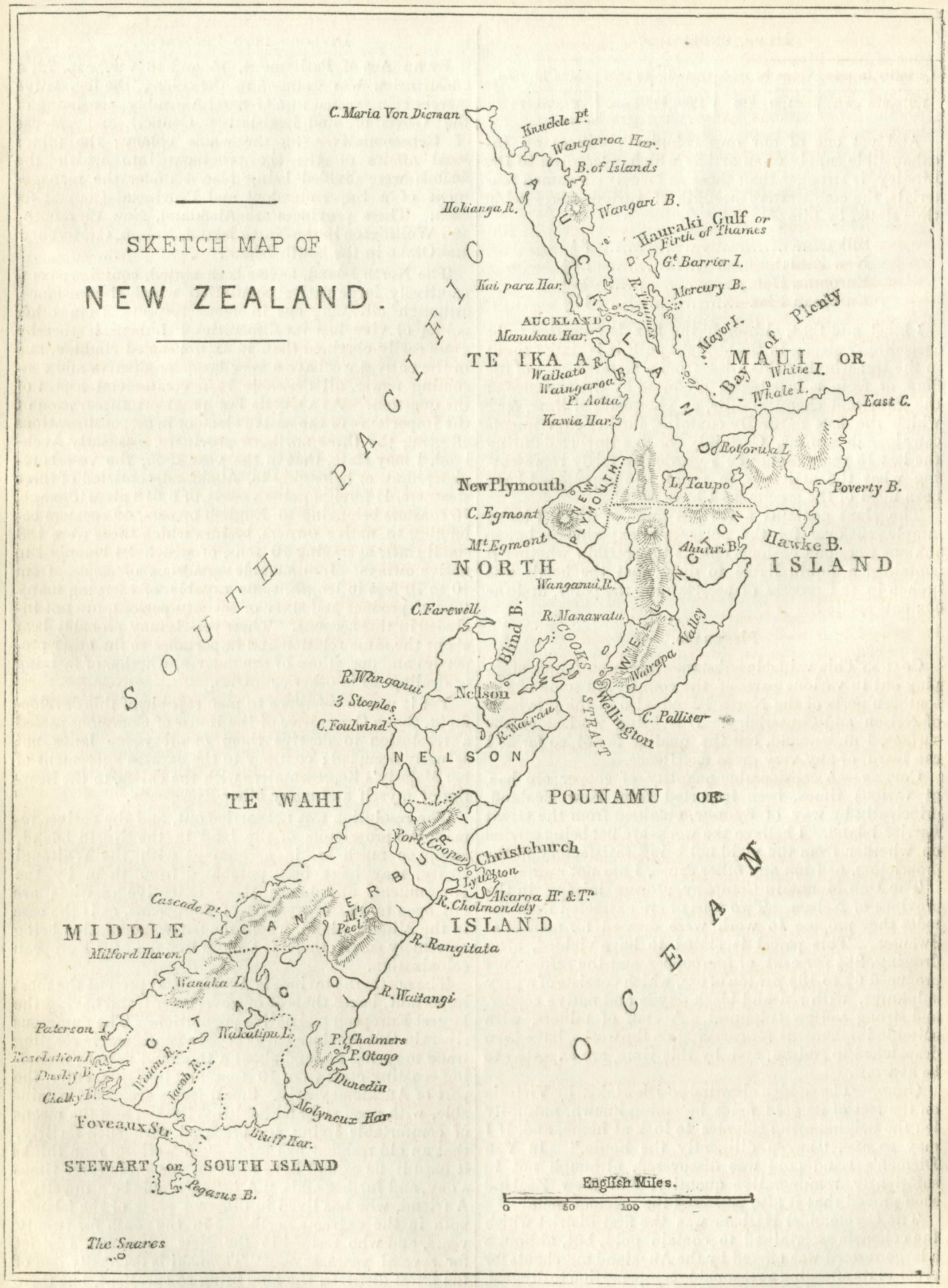
By an Act of Parliament, 15 and 16 Vic., cap. 72, a constitution was granted to the colony, the legislative powers being vested in a General Assembly, consisting of the Governor, and Legislative Council and House of Representatives, for the whole colony; the minor local affairs of the six provinces into which the islands were divided being placed under the management of a Superintendent and Provincial Council for each. These provinces are Auckland, New Plymouth, and Wellington in the North Island, Nelson, Canterbury and Otako in the South Island.

The North Island, as has been stated, contains a comparatively large native population, which circumstance, although advantageous in some respects, from other points of view has its difficulties. Labour is thereby more easily obtained than in an unpeopled country, and in the natives we have a very large productive and consuming power, all desirable in a commercial aspect of the question. As a simple but pregnant illustration of the importance of the native element in all considerations affecting the three northern provinces, especially Auckland, I may state, that in the year 1855, the vessels registered at, or belonging to, Auckland, consisted of three steamers, 41 foreign going vessels, of 6,618 gross tonnage, 75 coasters belonging to English owners, 49 coasters belonging to native owners, besides which there were 158 small craft, averaging 10 tons, of which 34 belonged to native owners. Innumerable squadrons of canoes, from 10 to 70 feet in length, some capable of carrying many tons of produce and sixty or seventy persons, are not included in this account. These vessels may probably bear about the same relation and importance to the other properties and operations of the natives, whether of farming or dealing, as in other countries.

Yet it was in reference to men capable of this development, that a Committee of the House of Commons passed a resolution to deprive them of all waste lands not actually occupied; contrary to the express agreement of her Majesty's Representative with the chiefs, in the hearing of myself and many other Europeans.

The resolution was not carried out, and the natives remain the proprietors of the land in the North Island, except so much as, in accordance with the Waitangi treaty, may have been purchased from them by the government, and hence those extensive districts are not open to the occupation of Europeans, as is the case in the Middle Island, where the native population being extremely small, there is a more free field for European colonization.

The northern province is Auckland, at present the most important, being the seat of government, and having the largest European and native population. The numerous rivers in this province have caused a considerable coasting trade to spring up, and about a thousand vessels, including coasting craft from 10 tons and upwards, enter the port of Auckland yearly. Small farms are easily obtainable, with good soil and healthy climate, and the means of comfortable living are procured with such facility, that an old resident has said,—"A working man thinks it hard if he cannot have meat on his table three times a day, and further adds, "A beggar would be a novelty." A friend, who has lived in different parts of the islands, both in the extreme north and in the south for twenty years, and who resided in the New Plymouth District for several years, says,—"Taranaki is decidedly one of the finest districts, the land being so excellent, but there is no harbour, and the roadstead is dangerous." And Governor Grey says, "I have never in any part of the world seen such extensive tracts of fertile and unoccupied land as at Taranaki." On the whole, this province justifies the high praise the natives have ever bestowed upon Taranaki as being the choice garden of the island. It is more suitable for agricultural than pastoral pursuits, and for small farmers is not surpassed by any other place



SKETCH MAP OF NEW ZEALAND.

LAND.—The following will, I believe, be found a tolerably correct account of the various modes of obtaining land in New Zealand:—

AUCKLAND.—*Town, Suburban, and Rural.*—These are sold by auction, at an upset price fixed by the Waste Land Board. *Special Occupation Land.*—On payment of a deposit of 1s. per acre any person may receive an order for not less than 40 and not more than 500 acres, and occupation is granted immediately on a lease for five years at a yearly rent of 6d. per acre, the deposit being the payment of the first two years' rent. After five years bona fide occupation and payment of all rent, a grant from the Crown is issued on payment of 10s. per acre. *General Country Lands.*—These may be acquired in lots of not less than 40 acres, on immediate payment of 10s. per acre. *Pasture Licences* for 14 years are obtainable by payment of an annual fee of £5, with an assessment of £1 for every thousand sheep above 5,000 which the run can carry.—New Plymouth, Wellington, and Nelson, are not very dissimilar in their land arrangements.

OTAGO.—Town lands are sold by auction. Rural lands are obtainable at 10s. per acre, subject to the condition of expending in money or labour for all improvements within 4 years, a sum equal to 40s. per acre. Pasture licences, annual fee £5, and £1 for every 1,000 sheep.

CANTERBURY.—Town lands by auction. Rural lands, 40s. per acre. Pasture licences, £1 per 100 acres.

on the globe. Taranaki is the native name for the district of New Plymouth.

Wellington and Nelson were founded by the New Zealand Company, and after many vicissitudes and troubles from various causes, are gradually rising to wealth and importance. Sheep farming has been extended, and the export of wool is assuming large proportions.

Of late gold has been discovered in the province of Nelson, and some settlers, I find, are leaving Auckland for the gold district. There has not been sufficient time to test the value of the diggings, and I trust they will not be so encouraging as to draw off the colonists from the steady pursuit of the more certain, though more slow, rewards of agriculture. For, however successful gold diggers may be, they are consuming capital as well as interest, whereas, in farming or sheep-breeding, generally speaking, more is yearly left on than is removed from the land, and in this view I am not certain whether, if all the gold diggers had devoted themselves with equal energy to ploughing and sheep and stock breeding, they would not have been quite as rich on the whole as they now are. Still there are "high pressures" among us to whom the exciting digging life is the most suitable industry, and to whom the humdrum round of farming and sheep-keeping would be unendurable, and so we wish them God-speed.

Canterbury and Otako are rapidly advancing to affluence, these provinces being eminently adapted for pastoral pursuits.

The gentleman to whom I previously alluded writes to me in reference to this part of the country: "The country generally is well adapted for sheep and cattle runs (my friend came from an English grazing country), also very good for cultivation, and I have little doubt but that when these settlements are fairly set going, they will soon be flourishing, especially for the grazier. The climate is much the same as some of the south parts of England, and appears to be healthy for European constitutions; the health of ourselves and family has been better here than it has been since we left England."

Emigration.

To intending emigrants I would point out New Zealand as offering to industry, easy competence, gradual improvement, and eventual affluence; not so rapidly, perhaps, as in some other colonies, but without their drawbacks. If you are farmers, and a good productive soil and delightful climate be your desire, then gratify your wishes by settling in the northern provinces; if to be rich in cattle and sheep be your ambition, seek its accomplishment in the southern provinces. If hale and strong, you have nothing to fear from the vicissitudes of the seasons, for to Englishmen the provinces are all mild; if delicate, seek the retention or restoration of health by settling in the northern provinces. If mechanics, you will probably find a larger sphere in the more peopled districts, as at Auckland, Wellington, or Nelson. But whatever you purpose, or whichever place you may select, go with a resolute brave heart, determined to stay, to spend your life in your adopted country. Leave nothing behind, but, converting all your properties into cash, remit the money through one of the two respectable banks which have branches in New Zealand, either the Union Bank of Australia, or the Oriental Bank Corporation. Carry nothing with you save a good stock of personal apparel, and under no circumstances whatever be persuaded to burden yourselves with furniture, except a chest of drawers, and still less be coaxed into the purchase of goods for sale, for recollect there are always supplies in Sydney ready to be poured into the New Zealand market within a few weeks of the special want arising; besides that, the merchants at all the principal ports have correspondents in England, who are only too ready, by the very first opportunity, to supply, in any quantity, whatever may be required. By the possession of cash, you would be enabled, in many cases, to purchase advantageously farms upon which much labour had been expended, the occupants desiring to remove, to retire altogether, to enter upon some other business, or leave the colony, and in arranging with such, the circumstance of receiving immediate cash is a great consideration. Nor is it of trifling importance that you should enter upon a partially cleared and ready tilled farm, rather than undergo the tedious hard labour of commencing everything anew for yourselves,—only those whose eyes have swept over miles and miles of forest and fern for days together, can appreciate the hope and joy that spring up at the sight of a little cultivated patch, however small, even a few yards square.

Communications with this Country.

Nor in speaking thus of the emigrant proposing to himself a final farewell of his native land, I do not at all discourage the idea of his often communicating with the dear old country; so frequently do the opportunities now occur that one can no longer expect a settler to jump for joy at a letter from home, and read with avidity, and interest next to his bible, an old newspaper from England.

It is less than twenty years since the first merchant ships began to sail regularly direct from England to New Zealand; previous to that date, the circuitous route of sending goods to Sydney, where they waited an uncertain time for a small vessel to convey them to New Zealand, was the only course possible. Vessels of considerable size now depart about once a fortnight to one or other of the chief ports, and so direct communication one way, outward, is tolerably frequent, but the export trade has not yet enabled us to have any regular communication from New Zealand; letters still come by way of the Australian colonies.

When the Peninsular and Oriental Company ran their steamers to Sydney with the English mails, correspondence with New Zealand was regular, the New Zealand government having subsidized a steamer to run monthly in conjunction with that line. On the removal of the steamers at the time of the Crimean war, the communications became extremely irregular, the arrival of the outward mail from England being uncertain, inasmuch as letters were sent from this country by sailing vessels to Melbourne, whence they were transmitted by a steamer to Sydney, and thence forwarded on to New Zealand by the contract steamer *William Denny*. On the new Australian contract being taken, it was hoped that regularity would become the rule, but we have been doomed to miserable disappointments; almost on the first voyage, under the new arrangement, the inter-colonial steamer was wrecked near the North Cape, and has not yet been replaced, therefore intelligence has at present to be conveyed to and from Sydney and New Zealand in sailing vessels, and when thus far on their journey, the irregularity in arriving and departure, and the utter inefficiency of the new Australian mail service, render all calculations unavailing. No one should just at present reckon upon his letters until actually in possession.

A brighter prospect is, however, opening before the colonists in this respect—the Royal Mail Company having entered into an arrangement by which, in the course of a year or so, a monthly communication, by way of Panama, will be opened between this country and New Zealand; a line of steamers will be placed on the Pacific to run in conjunction with the West India vessels. As New Zealand will be their first port of arrival in the Colonies, and the last of departure, the intercourse will be altogether different from the present, and as this line will be in addition to the Eastern mail line, we may thus hope to have a fortnightly service, and when the submarine telegraph system shall have laid its girdle round the earth, I do not despair of the possibility, in the lifetime of some present, of our being able to pay a bodily visit to our antipodal friends in 40 days, and to flash the thought divine in 40 minutes.

DISCUSSION.

Mr. P. L. Simmonds said, the subject which had been so clearly and connectedly brought before the members by Mr. Stones, was a very important one in view of the emigration which was daily taking place, and it had been presented free from all bias or undue partiality. Having for a long series of years paid a special degree of attention to the British Colonies and their resources, and New Zealand having recently been prominently before him, he might add some corroborative opinions to those advanced by Mr. Stones. Firstly, however, he would remark that he was delighted to find the Council paying a due proportion of attention, among numerous other subjects, to colonial interests—for the programme of papers to be read contained several—and the discussions upon these were calculated to benefit home interests, as well as the colonies themselves. Only that very morning he had been looking through a series of interesting New Zealand specimens sent him by his brother, a paymaster in the Navy, who had recently returned from that colony, and who spoke highly of the climate and capabilities of the New Zealand group, and that from an experience of several years, while attached to H.M.S. *Pandora*, surveying the New Zealand shores. Only a week or two ago also, in a business letter he had received from a correspondent at Auckland, dated Oct. 28, occurred these words:—"I have been ranging the colonies. After leaving Van Diemen's Land I was for nearly four years a resident in Sydney, visiting Adelaide, Melbourne, Wellington, and other places. I am now, I incline to think, finally settled in Auckland, where, thank God, I have been for the last nine years, sound and hearty as ever, and here I am likely to become a fixture. I consider New Zealand the flower of all the colonies, and I am happy to say I have not been unsuccessful in founding a home in her." When they considered that New Zealand was almost the youngest of Britain's colonies, her present position was a remarkable evidence of industrial progress, achieved, too, in the face of many adverse difficulties, despite the pet colonizing projects and schemes which had been carried to a certain extent and then dropped. But the indomitable energy of the settlers, thrown upon their own resources, with the natural advantages of a good climate, ample room for extension and progress, and steady perseverance, had achieved a present success which would compare favourably with any other British possession. When it was remembered that it was scarcely 17 years ago that the first settlements there were formed, with all the counter attractions of the Australian gold fields, and with the disadvantage of a long and expensive passage, which induced many thousands yearly to take the shorter voyage across the Atlantic, we yet found a European population of 40,000 settled in New Zealand, six distinct settlements formed on the Northern and Middle Islands, and flourishing towns dotting the coasts on either side from south to north. The revenues of New Zealand now amounted to nearly a quarter of a million; her customs duties bringing in £100,000, and her land fund about £80,000 to £90,000. And it was extremely satisfactory to find that the land was now open to the selection of small settlers at a reasonable price, instead of being only available at exorbitant rates in large blocks, as was formerly the case. While the Canterbury Company fixed the price of land at £2 and £3 per acre, land could now be had for 10s. an acre, and from the judicious arrangements of the provincial governments, a remission of the passage money, or, at all events, a commensurate allowance in land, was in many instances being made. He held in his hand an official announcement from the Immigration Department of the province of Wellington, dated the 11th August, by which it was notified that every immigrant would be entitled to receive ten acres of land for every £20 he should have paid on account of the passage of himself and family. Now this was a boon calculated to counteract, in some degree, the partiality evinced for Canada, where free grants of land were given to settlers in some districts, but in a much more severe climate. Although, as was remarked by Mr. Stones, the principal portion of the New Zealand trade was an inter-colonial one, and she sent large supplies of timber, agricultural produce, &c., for transhipment or for local consumption to the Australian ports, still we found that the value of the direct imports from New Zealand in 1856 were about £101,000, and the shipments of British produce and manufactures and foreign goods thereto, from the United Kingdom, amounted to about £300,000 in value. Mr. Stones had incidentally mentioned most of the indigenous productions of the colony. He (Mr. Simmonds) believed, however, much yet remained to be done with many of these; her fibres, her minerals, her building and furniture-woods, her dyes and tanning substances, the Kauri gum, (of which she now shipped 20 or 30 tons) and other produce, if not for export at least for local use and manufactures. With respect to her gold fields, injurious as these were, to some extent, as distracting attention from more settled industrial pursuits, still this disadvantage was counterbalanced by the thousands of restless spirits which they drew from other quarters, and who mostly settled down eventually, when unsuccessful in gold-finding, to other pursuits. Looking at the present discoveries, and judging from the geological formation of the islands, which no doubt at one time formed part of the great Australian continent, it was very probable that more important auriferous deposits would yet be found. Even the two gold fields already being explored were by no means insignificant, since, from one field at Aorari, the last steamer had brought 600 ounces to Nelson. But the extensive diffusion of gold through the Coromandel ranges, within 40 miles of the city of Auckland, appeared now to be established. Thus the Auckland *Weekly Register* of Oct. 5, in an article on the goldfields, active and passive, stated:—"Hundreds of ounces, under the greatest difficulties and discouragements, have been *known* to be obtained there; but who is there can tell the quantity that has been steadily and *silently* gathered by a few persevering hands? Samples upon samples of scale gold, and specimens after specimens of a sort of fawn-coloured quartz, actually studded, not streaked, with the precious metal, have from time to time been exhibited. From eleven ounces of such quartz Mr. Vercoe obtained seven ounces of gold. Other experiments, by Mr. Keven and others, have not been less encouraging; and yet, with all these incentives, with all these challenges to dig and grow rich, Coromandel is still as much overlooked as if her ridges bore nothing more precious than scoria or pumice-stone! These remarks have been drawn from us in consequence of a further and remarkable authentication of the great riches of Coromandel by the receipt (by the *Maid of the Mill*) of some beautiful specimens of quartz completely impregnated with the shining metal. We have the authority of gentlemen fully informed on the subject, for stating that this quartz was broken off a vast mass of the same material now in process of being crushed. This, we think, is one very sufficient reason why the Coromandel gold fields should no longer be suffered to remain unproductive." Another Auckland paper, the *New Zealander*, of Oct. 14, stated, with respect to Coromandel gold, "Mr. W. Wilson, whom many of our readers may remember as formerly in business as a baker in this city, and who resided for seven or eight years in California, has this day brought for our inspection a fine sample of gold, which he has just obtained in the neighbourhood of Messrs. Roe and Street's saw mill He further states that in the course of a hasty prospecting visit, he saw enough to convince him of the richness of this neglected gold-field, which he considers quite equal to anything he met with during his stay in California, where, for five years, he was constantly at the diggings." The other provinces were put on their mettle by these discoveries, for at Otago a public meeting had been held to provide, if possible, a counter attraction in the form of a remunerative gold field, so as to prevent the departure of the new immigrants arriving, and it was broadly asserted in the resolutions that " the existence of gold in certain districts of the province is a well-ascertained fact, and it therefore behoves the provincial government to take active and immediate steps for ascertaining the localities where its working would prove remunerative." Passing next to its principal staple, the wool shipments, we found that, while only 487 bales were shipped from New Zealand in 1849, our imports thence in 1857 reached 8,325 bales. It was stated by one of the members, in a Wellington paper, that that province, out of its 10,000,000 acres, had about 4 or 5 millions fit for pasturage in their natural state, and these, at the rate of 1 sheep to 3 acres would yield 13,000 bales annually, worth about £200,000. If improved and cultivated, however, the pasturage would probably feed 6 sheep to the acre. But this was only one district. The province of Auckland could not be surpassed as a wool growing district, either as to quality or quantity from each sheep. One of the first wool-brokers in the City had remarked, that when the first specimen of New Zealand wool was brought to him by some gentleman unknown, without saying whence it came, and his opinion being asked of it; after examining it carefully, he replied, " Whatever country that wool comes from must be a sheep's paradise." He had since stated that there were some peculiar and very valuable qualities in the best New Zealand flocks, and as for strength of fibre, it was " as tough as their native flax." He would say nothing as to hides, cattle, and other agricultural produce, but he was glad to notice that the Chinese and African sugar grasses (species of *Holcus*) had been introduced, and their cultivation might possibly be attended with beneficial results, and lead to the production of sugar for local consumption. These grasses, which had been introduced largely of late into Europe, Canada, and the United states by his friend Mr. Leonard Wray, a Natal colonist, possessed those beneficial properties, that they would ripen and yield sugar in temperate climates, and come to maturity in three or four months, whereas the sugar-cane took twelve months or more before it yielded a crop. There was one index which afforded a better criterion than almost anything else of the position and prospects of a colony, and that was the nature of its newspaper press. Receiving as he did, regularly, all the New Zealand journals, he learnt more of their condition and progress, their wants and grievances, than could be gleaned elsewhere. Now, when he told them that there were 18 or 20 newspapers now published in the New Zealand islands, newspapers, most of which would do no discredit to the metropolis or the large provincial towns, whether as regarded their typography, paper, or conduct, this was a remarkable index of progress. Several of these papers were issued twice a-week, full of business advertisements, appearing at Dunedin, in Otago; at Lyttelton, in the Canterbury settlement; at Nelson and Wellington, in Cook's Straits; at Taranaki, in New Plymouth; at Wanganui; at Ahuriri, in Hawke's Bay; and at Auckland. Now, this was a state of things which compared favourably with any other British colony, and he could not but contrast it with the time when, in the infancy of the colony, a friend of his, who conducted a journal issuing from the Government printing-office at Auckland, had the permission to print there withdrawn, owing to the freedom of his remarks against the Executive, and after collecting all the stray type that could be obtained, was driven to the shift of printing his paper by means of a mangle, as there was no other press in the colony. He (Mr. Simmonds) had laid copies of all the principal New Zealand journals on the table, and the members and visitors who were not in the habit of seeing those colonial papers, could form an opinion of their business character for themselves. He found he had already taken up a large share of their time, and as he saw present Mr. Ridgway, Mr. Sidney, and other gentlemen, who could give them much valuable information, he would now give way to them.

Mr. Ridgway said although he had never been in New Zealand, yet he felt a deep interest in that colony, having been officially connected with it for a great number of years, and his name would be found in connection with its earliest establishment, particularly with regard to the province of Auckland. Mr. Stones, in his very able paper, had given them a rapid sketch of this rising colony, but there were some points of importance which he had omitted. First of all there were the questions which agitated, and, in fact, retarded the progress of the colony to a great extent. He alluded to the political discussions and the jealous contests between the provinces of Auckland and Wellington, as to which should be the seat of government. Peculiar circumstances tended to make Wellington a province, but he would appeal to the shippers to New Zealand whether the difference in the rates of insurance as between Wellington and Auckland was not a fact in favour of the latter. The port of Wellington had many disadvantages. The winds blowing through Cook's straits during the greater part of the year caused great difficulty in navigating them, and when vessels arrived at Wellington the landing was often difficult and dangerous, and they were also locked in. The high lands which surrounded Wellington prevented ready access to the interior. The timber in the neighbourhood of Auckland was extremely valuable, the trees growing to an enormous size. At the Paris Exhibition unfortunately there was no means of properly testing the quality of the timber sent, because the specimens were too small. The contributions from this colony were meagre in comparison with what they might have been had not the colonists considered themselves somewhat slighted at the Great Exhibition of 1851. With regard to the Coromandel gold fields, he was not sufficiently acquainted with the subject to be able to speak upon it, but his impression was that that district did not belong to the British crown, but still remained a part of the native possessions, and until it became British property it was not likely our people would expend much money in prospecting upon that place, though unquestionably there were valuable gold fields there. With regard to the article of coal, he had been assured that it existed in great abundance in New Zealand, but the great difficulty was in working it, on account of the scarcity of labour. From all he had heard it was of good quality, and it was well known that the lower they worked for coal the better the quality was. With reference to the Kauri gum, it was a valuable production, in great plenty in the colony. With regard to the facilities for exporting products from New Zealand, they were not so great as those which were possessed by other and less remote colonies, inasmuch as the ships which took out emigrants went to China or India for their return cargoes. Reverting to the subject of the scarcity of labour in the colony, he was happy to say that he had recently despatched by the ship *Egmont*, 60 or 70 labourers, promising men, of good character; and the advantages of emigration to Auckland consisted in the arrangements of the provincial government, of which he (Mr. Ridgway) was the agent, who paid one-half of the expenses of the emigrant's passage, leaving him to pay the other half six months after his arrival in the colony. It was a mistake to pour in large numbers of emigrants all at once. They had instances of 6,000 or 7,000 emigrants being poured into Melbourne in the course of one week, and under such circumstances it was impossible but that the labour market should be overstocked, and hence much disappointment and misery resulted. Whilst speaking of Auckland as possessing undoubted claims to the seat of the government, he would refer to Nelson, Otago, and other places in the colony, as being most desirable for those who went out with large families. The most important point, perhaps, in connection with this subject was the means of regular and speedy communication with our Australian colonies, especially by way of New Zealand. He had always contended that the Panama route, by way of New Zealand, was the right one. With reference to the sale of land in our colonies, in his opinion the disposal of it in small allotments was of the greatest advantage to the emigrant, because it prevented jobbery in land. Every one could obtain small plots of land in New Zealand at 10s. an acre. The government bought it at about 7d. per acre, or even less for large blocks, and the profit made by the sale of the land went to help poor persons in their passage to that colony, and thus employment was given to our ships, and markets were created for our home manufactures.

Mr. **William Hawes** said it appeared to him that the most important part of the paper was the placing before them, in well-arranged and consecutive form, information which would enable intending settlers to determine which of our many colonies they would select. The great point was to know whether particular colonies were capable of producing those commodities which were in greatest demand at home, and then they could select the destination which appeared to hold out the greatest chances of benefit to themselves and their families. The great staple productions of New Zealand might be regarded as timber, wool, and gold, and to these this country would attach greater importance than to any others. He could not go to the extent of saying that gold digging ought to be deprecated, for who could say what would have been the position of the commerce of the world in general had not our supply of gold been largely increased by the discovery of the gold in Australia and California? Therefore, let them not deprecate the search for gold on the ground that it ate up capital. Labour was given in exchange for gold, and the gold was exchanged for the manufactures of this country, and a beneficial system was thus established. It was quite clear that the object of the paper that evening was to prove that New Zealand offered greater advantages to settlers than any other colony. Whether it would be successful in that he could not say, but it could not be denied that much valuable information was given, which would greatly help in deciding the question as to the quarter which one would choose as his ultimate destination, and it might be a question with many whether New Zealand had not great claims for preference over many other colonies that had up to the present time been more highly favoured.

Mr. **Samuel Sidney** said that in the course of the many years that he had devoted his attention to colonization, he had never heard a paper on the subject of New Zealand which was so full in its details and, at the same time, so free from the exaggerations which had hitherto almost invariably characterised everything written or spoken by the friends of that interesting colony. New Zealand afforded a striking example of a colony spoiled by over-praise, over-regulation, and over-legislation. It reminded him of the child of the anxious mother overwhelmed with tutors and doctors, and yet, with all her pains, neither clever nor healthy, and on appealing to a woman of common sense, she recommended the trial of "a little healthy neglect." Twenty years had elapsed since the colonization by the great defunct company at one end, and the Government at the other, commenced; until the company fortunately became bankrupt, and the government, about the same time, allowed colonists to manage their own affairs. New Zealand was the subject of a series of experiments in colonization, each more disastrous to the colonists and more costly to the mother country than the last. Models of colonization were promised in Wellington, in Nelson, in New Plymouth, in Otago, and in Canterbury, examples of slices of English civilized society, capitalist squires, respectful and cheap labourers concentrated round cities, with churches, schools, colleges, and macadamized roads. But all had ended in the ruin of the emigrants, who only began to succeed when they followed the example of unsystematic colonists, and allowed labouring men to cultivate cheap plots of land, while men of money betook themselves to dispersion and sheep-feeding. He had calculated that as much money had been spent in Blue Books, Naval Books, Reports, &c., on New Zealand, as would have paid the whole cost of governing Port Philip up to the time that gold digging commenced there. The successful colonization of New Zealand, described so effectively by Mr. Stones, had been worked out by those who, disappointed or ruined, could not or would not return, and, therefore, with a true Anglo Saxon spirit set to work with the happy results which they had had the satisfaction of hearing that evening. Ten years ago (the last time in 1850, at the great meeting of the Canterbury colonists) he (Mr. Sidney) had contended, in opposition to many influential men, that only on a low-price system of land allotment could New Zealand flourish, and now he had the satisfaction of finding that the local legislature had been forced to repeal the laws of the English parliament and the rules of the New Zealand Company, and adopt his once unpopular views. Having said thus much by way of preamble, he would venture, in the most friendly spirit, to dissent from two or three of the opinions that had been laid down that evening. Mr. Stones had very modestly referred to all the productions of New Zealand with the exception of the great staple wool; to that he appeared very wisely to give the palm of importance. He had suggested that emigrants of small means and strong arms should apply themselves to the cultivation of the not very expensive or accessible parts of the naturally fertile soil, whilst those of large means should direct their atttention to pastoral pursuits. His friend, Mr. Simmonds (of whose zeal in placing before the public the raw productions of various quarters of the globe it was impossible to speak too highly), had been, he thought, a little too enthusiastic in the stress he had laid upon the manufacturing and mining products of New Zealand. He (Mr. Sidney) thought, in the course of time, New Zealand colonists, with more capital at command than they had at present, or were likely to have for twenty years, might discover some mode of turning native flax to profitable account; but he would warn those who thought of emigrating to that colony not to turn their attention to flax manufacture, unless they were prepared to sink a great part of their capital—for this flax had occupied the attention of colonists for the last 20 years. During that time a vast amount of money had been spent upon it, without the slightest commercial success, and a colony was not a place for the scientific experiments of capitalists or amateurs. The first business of a colonist was to make sure of a livelihood by the staple pursuits of the colony, not to indulge in speculations, either in flax or copper mines, or veneered woods. With regard to copper ore, success depended upon the facilities for raising it. When South Australia was on the point of ruin, the Burra-burra mines were discovered, and saved the colony, but following that discovery there were no fewer than 97 other mines, of which not more than two had ever paid a shilling of dividend. The remarks he had made with regard to metallic ores applied with equal force to the woods of the colony. The wood was very pretty, and it might answer the purpose of a single cabinet maker in London to import a few logs or roots; but there was scarcely a quarter of the globe in which equally beautiful woods were not to be found; it was, however, found that it would not answer to bring them into competition with the rosewood and mahogany, which were obtained at so much less cost of labour and of freight. With regard to the awards of medals at exhibitions, he did not attach much importance to them; commercial demand was the best and surest reward for commercial producers. He advised those who thought of colonizing to turn their attention to pursuits which would put bread into their own and their children's mouths. He did not, with Mr. Simmonds, anticipate any competition between the two colonies in the growing of wool, because the demand for that article was so great that manufacturers could consume the wool of a dozen purely pastoral colonies. But he would also warn intending emigrants against the idea that, whereas without cultivation they could feed three sheep per acre, with cultivation they could feed six sheep per acre. Those were statements, he apprehended, taken from New Zealand handbooks. The fact was that the land best adapted for sheep feeding was just that which was not fit for cultivation. Root cultivation on English principles was impossible with New Zealand prices of labour. The great profits derived from sheep feeding consisted in the fact that the animals were able to get their own living, with a comparatively small expense for shepherding. He agreed in the statement that those who emigrated to these colonies should go to settle if they meant to succeed, but he thought, too, that in the present day, the mass of the people understood emigration quite as well as those who intended to instruct them. As for the colonists, they might perhaps make mistakes in legislation, as we had done, but they were competent to work out a suitable government, and he doubted not that New Zealand would take up a creditable and successful position among the colonies founded by the English-speaking race.

Mr. E. Ward Trent remarked that a misapprehension existed as to the mode in which the flax was prepared by the natives of New Zealand. The notion generally was that the leaves were scraped with a shell, but the fact was, incisions were made in the leaves, and the fibres were then stripped off, and formed the New Zealand flax of commerce. He felt persuaded that the method of cleaning the flax introduced by Thierry and others, would prove a failure, for this reason: that the persons employed in the work were not practical men; and they lost sight of one fact which the natives had discovered, viz., that one side of the leaf contained the silk-like fibre, whilst on the other side there was a ribby material; and under the process of Thierry these two materials became mixed together, producing a rough and unsaleable article. He thought any method which failed to separate the two classes of fibres, as was done in the native mode of preparing the flax, would be an utter failure. He had experimented upon most of the fibres that had been brought into the market during the last 25 years. The reason why New Zealand flax had been so little taken up was from the fact that it came over heckled, and the yellow bark, which had a deteriorating effect upon ropes made from it, was not got rid of. The quantity of material necessary for a three-inch rope with the yellow bark in it, would not be sufficient for a two-inch rope when that substance was not present. The specimens now exhibited confirmed the opinions he had previously expressed in the Society's *Journal*, that the methods of cleaning the flax recently introduced were complete failures, and it was a subject which still required investigation.

Mr. John Topham wished to inquire whether coal was worked in New Zealand to a sufficient extent to warrant a steam navigation company in depending upon it as a source of regular supply.

Mr. Stones said it was not so at present.

Mr. Ridgway remarked that that was because there was a want of labour to work the coals.

The Chairman, in proposing a vote of thanks to Mr. Stones, said the extraordinary interest and value of his paper merited their warmest acknowledgments. When they looked at New Zealand and reflected what it was 20 years ago, and saw the immense progress that the colony had made in that time, and the development of its resources under the enterprise and skill of its Anglo-Saxon settlers, they must feel more than ordinary obligations to the gentleman who had brought this interesting subject before them. Twenty years ago there was a population of only 4,000 Europeans in New Zealand; it now numbered upwards of 40,000, who, being themselves Christians, might look for the conversion of the native population to Christianity, and the development of those industrial arts which invariably followed in the wake of European colonisation. The paper had been a most attractive one, from the variety of subjects it embraced, and he was sure they would heartily accord their thanks to Mr. Stones.

A vote of thanks was passed to Mr. Stones.

The Secretary announced, that on Wednesday evening next, March 3, a paper by Mr. A. G. Findlay, "On the Progress of the English Lighthouse System" would be read. On this evening Henry Cole, Esq., C.B., will preside.

The Secretary also announced that the drawings by W. Mulready, R.A., the result of the Mulready Exhibition of 1848, about to be presented to the trustees of the National Gallery, will be exhibited on Wednesday evening next, when the Chairman will, previous to the reading of the paper, call attention to, and make a few remarks upon, the circumstances attending the presentation.

NORTHERN ASSOCIATION OF MECHANICS' INSTITUTIONS.

The Northern Association of Literary, Mechanics', and Educational Institutions of Durham, Northumberland Cumberland, and Westmoreland, was established in 1848, the object being the publication of an annual report, affording facilities for obtaining lecturers of ability on moderate terms, the free use of 100 manuscript lectures, the annual meeting of delegates, held every year in a different locality, at which meetings valuable information is elicited, and mutual sympathy and encouragement given for further exertions, the procuring of parliamentary reports free to the societies, advice where it is desired, on every subject connected with Mechanics' Institutions, to revise rules, to examine and grant certificates and prizes to the members of the associated Institutions, the interchange of privileges between the members of different localities, so that the members of one being temporarily in the neighbourhood of any other, may enjoy for a limited period the privileges of admission to its library and reading-room, and to offer suggestions for the formation of new societies, and generally to co-operate for the mutual benefit and encouragement of all societies having for their objects the intellectual improvement of the community.

In 1849 the Itinerating Library was established by Mr. J. L. Thornton, the honorary secretary, which has been followed by other unions forming similar collections of books for the use of the Institutions in their unions. The following are the rules of the library :—

I. That the books are intended exclusively for the use of the members of the Societies forming the Union.

II. That twenty volumes shall form one set; and that no society shall have more than one set at once.

III. That two months shall be allowed for each set of books; and if not returned within the time specified, the society detaining them shall pay a fine of sixpence per day.

IV. That the carriage of the books shall be defrayed by the societies.

V. That the books shall be sent at the risk of the societies, who shall replace them if lost or damaged.

VI. That, in every case, proper directions shall be forwarded to the secretary, as to the manner in which the books have to be sent to each society.

VII. If any book be written in, or otherwise damaged, the society in whose hands the book was at the time shall pay the value of it, or replace it.

VIII. That when books are returned, they are to be delivered, free of all charge, to the secretary.

IX. No society shall be allowed to have books until its subscription for the current year has been paid.

X. No books shall be re-entered to the same society until the expiration of two months.

The principal object of the library was to supply small localities with a new selection of books. Many villages are so circumstanced, that where young people have no means of obtaining mental improvement by reading, the public-house is the only alternative for social intercourse and relaxation. The Itinerating Library of the Association was instituted to supply this deficiency, and to transmit to small societies and places where no reading-room exists, a succession of books calculated to improve the minds and elevate the character of the people. Although there are 36 boxes of books constantly circulating, the want of more books prevents the Association from extending the application of this great moral power to the extent which is desirable, and the demand which is constantly made upon them. The Association is under great obligations to His Royal Highness the Prince Consort for a valuable present of above 200 volumes to this library.

The following are the general rules of the Association:—

1. That the society be called "The Northern Union of Literary and Mechanics' Institutions," and that all Institutions including, amongst their objects, the intellectual advancement of the people, shall be admissible to the Union.

2. That the mode of admission shall be by a majority of the votes of the council, provided the society seeking admission shall forward to the Secretary of the Union a written application, signed by its secretary.

3. That the management of the affairs of the Union shall be intrusted to a council, consisting of a President, Treasurer, and Secretary, and ten other members, who shall elect their own chairman. The council shall be empowered to fill up vacancies which may occur during the year, and, generally, to be the medium of communication in any plans of co-operation among the Institutions in the Union. That Newcastle be the seat of the council.

4. That the expenses of the council shall be confined to the cost of advertisements, postage, the annual meetings, printing, copying of lectures, stationery, books, prizes, &c., &c.; and that the subscription be as follows:—Institutions having less than 200 members, 2s. 6d., and those having 200 members and upwards, 5s. per annum, payable in advance, and due immediately after the annual meeting.

5. That it shall be one of the objects of the Union to promote the exchange and circulation of lectures among the associated Institutes. The Union shall direct its attention to the development of all measures calculated to promote the moral and intellectual advancement of the people.

6. That an annual meeting of one delegate from each Institute having less than 200 members, and two delegates from each of those having 200 or more, shall be held to receive the report of the Union for the preceding year, to appoint a new council, to fix the place of the next meeting, and to confer upon any suggestions or new plans relating to the management of Mechanics' Institutes. The time of meeting to be fixed by the council, and six weeks' previous notice of the same shall be given to each society.

7. That, fourteen days prior to the annual meeting, each Institute shall transmit to the council a condensed report of its proceedings for the year.

8. That no alteration in the laws of the Union shall be made except at the annual meeting; nor then, unless notice of the same in writing shall have been sent to the secretary of the council at least one month previous, and been by him notified, at least three weeks before the day of meeting, to every society in the Union.

9. That no Institution shall separate from the Union except at the annual meeting; nor then, unless it shall have given one month's previous notice.

10. That the council shall be required to call a special meeting of delegates, provided two-thirds of the Institutes in the Union require it. The council in such case shall forthwith give one month's notice of the day of meeting to all the Institutes in the Union.

11. That the council may elect as honorary associates persons eminent for their attainments in literature, science, or art; or who have borne a distinguished part in promoting the welfare of Mechanics' Institutions, and furthering the progress of education.

12. That any person subscribing to the Union as an honorary member shall have the privilege of nominating one or more Institutions (according to the amount annually subscribed), which shall participate in all the benefits of the Union; and, in cases where this is not done, the right of nomination is assumed by the council. The honorary members are entitled to hold office, and to attend and vote at the annual meetings.

The Prizes and Examinations for the present year are as follows:—

The Examiners will award three classes of certificates, viz., 1. Certificate of Excellence, 2. Certificate of Proficiency; 3. Certificate of Competency; and to the highest certificate the Council will award the diploma of an honorary member of the Association. The Council of Examiners may recommend some additional prize to those whose acquirements deserve further recognition. Several merchants and manufacturers have intimated that they will receive the certificates of the Association as satisfactory in the appointment of clerks, &c.

The Examination will be conducted by written papers and oral examinations.

Every candidate offering himself for examination will be required to be a member of one of the associated Institutions, and to give notice to the Secretary on or before the 1st of June, and to state the subjects on which he wishes to be examined, and the books which he has studied.

Examinations will be held in English literature, grammar, and composition; writing from dictation; geography; arithmetic—common, vulgar, and decimal fractions, reduction, proportion, practice, and interest; book-keeping by double and single entry; mathematics; mechanics; chemistry; physiology; natural history; botany; mechanical and free hand drawing; English history; Latin, French, and German.

Prizes for 1858.

The following regulations must be observed with reference to the prizes:—That the competitors must be members of one of the associated societies. That the essays, &c., must be sent to the secretary (post-paid), under cover, endorsed with an English motto, and accompanied with a note, endorsed with the same motto, containing the author's name. The notes of the successful candidates only to be opened, and their name disclosed, after the Examiners shall have determined what essays are the best. The length of the essays not to exceed sixteen pages of the printed matter contained in one of the *Quarterly Reviews*, and they must be written only on one side of the paper, and in a good hand. That no essay shall be received after the 1st of July, 1858. When the language of other authors is employed, it must be marked by an inverted comma.

1. A prize of five pounds will be given by George Ridley, Esq., M.P., for the best essay—"Whether has the *Printing Press*, or the *Steam-engine* as applied to *Loco*

motion by *Land* and *Water*, conferred the greatest benefit on mankind."

2. A premium in books, suitably inscribed and bound, given by a friend, for the best dissertation on "The Historical and Romantic Ballads of Northumberland."

3. A silver medal, by the Association, for the best essay on "What Effect have Works of Fiction produced upon the present Age, and to what Extent should they be admitted into Public Libraries."

In cases where there may be no competition for a prize, it shall be left to the option of the Examiners whether the prize shall be given.

The Council reserve to themselves the right to publish the whole, or any parts of the successful essays.

MATHEMATICAL PRIZES.—QUESTION I.

By S. Fenwick, Esq., F.R.A.S., &c.

A series of parabolas which have a common tangent, and also a common directrix, revolve about an axis perpendicular to the directrix; prove that their foci generate a surface of the second order.

QUESTION II.

By W. Rutherford, Esq , LL.D., F.R.A.S.

A grooved rigid rod of small diameter is placed with one end on a horizontal, and the other on a vertical plane, along which the rod slides without friction; and a particle, whose weight is inconsiderable with respect to that of the rod, is placed in a given position in the groove. How must the rod be placed initially, so that when it is abandoned to the action of gravity, and the particle allowed to move freely down the groove, the particle may just leave the groove at the instant the rod falls into a horizontal position?

QUESTION III.

By W. S. B. Woolhouse, Esq., F.R.A.S., &c.

Supposing a cube to be thrown into the air at random, and a shot fired through it, determine the value of the probability that the shot will pass through opposite faces of the cube.

For the best solution to each of the above questions medals will be awarded by the Association. The ingenuity and elegance, as well as the correctness of the solutions sent by the competitors, will come under the consideration of the Examiners in estimating the value of each contribution. The mathematical prizes are open to all residents in, and natives of, the four northern counties.

The solutions must be sent on or before the 1st of July, 1858.

The following gentleman are the Honorary Examiners:

Mr. George Bell, M.A., Newcastle.
Dr. Charlton, Lecturer on the Principles and Practice of Physic, &c., in the Newcastle College of Medicine.
Mr. James Clephan, Gateshead.
J. P. Dodd, LL D., North Shields.
Mr. T. Doubleday, Author of "The True Law of Population," "Mundane Moral Law," &c , &c.
Mr. D'Acosta, Professor of Languages, Royal Grammar School, Newcastle.
Dr. Embleton, F R.C.S., &c., Professor of Medicine in the University of Durham
Mr. Stephen Fenwick, F.R.A.S., Royal Military Academy, Woolwich.
Mr Grant, Author of "Madonna Pia," &c.
Dr. Humble, Lecturer on Materia Medica and Therapeutics, Newcastle College of Medicine.
Mr. R. Malcolm, Trafalgar-st. Academy, Newcastle.
Mr. T. F. McNay, Lecturer on Surgical Anatomy to the Newcastle College of Medicine.
Dr. Richardson, M.A., Professor of Chemistry in the University of Durham.
Dr. Rutherford, F.R.A.S., Royal Military Academy, Woolwich.
Rev. J. Snape, Head Master of the Royal Grammar School, Newcastle.
Rev. W. Spencer, B.A., St. John's College, Cambridge.
Mr. H. Wilson, Romulus-terrace, Gateshead.
Mr. W. S. B. Woolhouse, F.R.A.S., London.

Home Correspondence.

THE PUDDLING OF IRON.

SIR,—In reply to Mr. Wentworth Scott's letter which appeared in last week's *Journal*, I beg to state that an answer will be found to that gentleman's inquiries in the *Philosophical Magazine* for September 1857, in which Mr. R. Johnson and myself have published the details of our experiments on the chemical changes which pig iron undergoes during its conversion into wrought iron.

I am, &c.,
F. CRACE CALVERT.

Manchester Royal Institution, Feb. 24, 1858.

MEETINGS FOR THE ENSUING WEEK.

MON. Royal Inst., 2. General Monthly Meeting.
Entomological, 8.
Med. and Chirurg., 8. Anniversary.
TUES. Royal Inst., 3. Prof. Huxley, "On Biology."
Civil Engineers, 8. Discussion, "On Submerging and Repairing Telegraphic Cables."
Pathological, 8.
Photographic, 8.
WED. Society of Arts, 8. Mr. A. G. Findlay, "On the Progress of the English Lighthouse System."
Pharmaceutical, 8.
THURS. Royal Inst., 3. Prof. Tyndall, "On Heat."
Zoological, 3.
Royal Society Club, 6.
Antiquaries, 8.
Chemical, 8. Messrs. Perkin and Duppa, "On the Action of Bromine on Acetic Acid."
Linnæan, 8. I. Dr. Lindley, "Contributions to Indian Orchidology." II. Mr. Bentham, "Synopsis of the *Lægnotideæ*." III. Mr. Currey, "On the Fructification of the compound *Sphæriæ*."
Philological, 8.
Royal, 8½.
FRI. Archœological Inst., 4
Royal Inst., 8½. Prof. C. Piazzi Smyth, "Account of the Astronomical Experiments on the Peak of Teneriffe in 1856, illustrated by Photographs."
SAT. Asiatic, 2.
Royal Inst., 3. Prof. Bloxam, "On the Chemistry of the Elements which circulate in Nature."
Medical, 8.

PARLIAMENTARY REPORTS.

PRINTED SESSIONAL PAPERS.

Parl. No.

Delivered on 17th February, 1858.

60. Dead Letter Office—Return.
65. Patriotic Fund (Colonies)—Return.
70. East India (Additional Troops)—Return.
74. East India (Police)—Return.

Delivered on 18th February, 1858.

46. Statue Law Commission—Return.
67. Queen Anne's Bounty—Account.
73. East India (Governor General)—Return.
79. East India (Sir Peregrine Maitland)—Return.
80. Sardinian Loan—Account.
81. Greek Loan—Account.
82. Russian Dutch Loan—Account.
20. Bills—Medical Charities (Ireland) Act Amendment.
21. ———Joint Stock Banking Companies.

Delivered on 19th February, 1858.

49. Westminster New Palace—Return.
57. Savings' Banks (Number of Depositors, &c.)—Accounts.
57. (1). Savings Banks (sums paid in or withdrawn)—Correspondence.

Delivered on 20th and 22nd February, 1858.

44. Excisable Liquors, &c., (Scotland)—Return.
69. Poor Relief—Return.
77. Public Debt—Account.
71. East India (Missionaries, &c.)—Return.
84. Mint—Account.

87. Committee of Selection—First Report.
47. Cambridge University—Copies of Statutes.
23. Bill—Prescription (Ireland).

SECOND SESSION, 1857.

296. East India (Cotton)—Return. Part 1. Bengal and North Western Provinces.

PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[*From Gazette, Feb.* 19, 1858.]

Dated 5th January, 1858.

17. John Platt, Oldham—Improvements in machinery or apparatus for spinning and doubling or twining cotton and other fibrous materials.

Dated 21st January, 1858.

108. John Joshua Robinson, Fratton, near Portsea—Improved apparatus for sorting and stamping letters, books, newspapers, and other articles.

Dated 29th January, 1858.

161. Edward Hammond, Nos. 90 and 91, Herbert-street, Hoxton—The manufacture of cap fronts, and applicable to the manufacture of ruches, ribbon trimmings, and other articles of millinery.

Dated 1st February, 1858.

177. Thomas Heppleston, Manchester—Certain improvements in machinery or apparatus for doubling, twisting, and reeling yarns or threads.
179. James Alexander Manning, Inner Temple—Improvements in the manufacture or production of manure.
181. James Childs, Belmont, Vauxhall—An improvement in the manufacture of the boxes or cases used for night lights.
183. Josiah Haste, New Dock Works, Leeds—Improved apparatus for preventing the explosion of steam boilers.
185. Richard Archibald Brooman, 166, Fleet-street—Improvements in sewing machines. (A communication.)

Dated 2nd February, 1858.

187. William Cartwright Holmes and William Hollinshead, Huddersfield—Improvements in the manufacture of gas, and in apparatus employed therein.
189. William Edward Newton, 66, Chancery-lane—An improved instrument for sharpening the blades of knives. (A communication.)
191. William Westley, Birmingham—Certain improvements in the construction of heels for boots and shoes.
192. John Gray, Bonally Tower, Colinton, near Edinburgh—Improvements in printing machinery.

Dated 3rd February, 1857.

193. Edmund Moss, Manchester—Improvements in weighing cranes.
194. John Morris, Red House, Great Bridge, Staffordshire—Improvement or improvements in boots and shoes.
195. Alfred Hollis and Stephen Lee, Darlington—Improvements in the construction of chaldron-wagon and other railway wheels.
196. Anthony Nicholas Armani, Haverstock-hill—Improvements in rail or tramways for streets and ordinary roads.
197. Ernest François Dillage, 14, Boulevart Poissonniere, Paris, France—Improvements in machinery or apparatus for raising, forcing, and exhausting fluids, air, and gases. (A communication.)
198. William Edward Newton, 66, Chancery-lane—Improved apparatus for raising and lowering the skirts of ladies' dresses. (A communication.)
199. Leon Salles de la Magdeleine, Paris, France—An improved manure.
201. William Longley, Erith, Kent—Improvements in apparatus for grinding and splitting grain.
202. William Clark, 53, Chancery-lane—Improved hydraulic apparatus for obtaining motive power. (A communication.)

Dated 4th February, 1858.

203. Joseph Harrison, Brailsford, Derbyshire—Improvements in apparatus for making cheese.
204. Robert Harland, Derby—Improvements in the break lever guard of railway trucks.
205. David Smithies, Manchester—Improvements in the manufacture of healds or harness for weaving.
206. Benjamin Beale, Greenwich—Improvements in apparatus for paying out and drawing in electric telegraph cables, applicable also to the raising and lowering of weights.
207. John Avery, 32, Essex-street, Strand—An improvement in mechanical movements for sewing and other machines. (A communication.)
208. David Williams, Tredegar, Monmouthshire—Improvements in the construction of ovens or furnaces for the manufacture of coke, and in the means of emptying or discharging the same.
209. George Bertram, Edinburgh, and William McNiven, Polton Mill, Lasswade—Improvements in the manufacture of paper.
210. Charles Knight, St. John's-wood—An improved railway guide.
211. Julius Goodman and Louis Goodman, Finsbury-street, Finsbury-square—An improved portable umbrella.
212. William Rhodes, Manchester, and Henry Napier, Brooklyn, New York—The production of a "new paint oil."

Dated 5th February, 1858.

213. Alexander Crichton and Matthew Whitehill, Paisley, Renfrew, N.B.—Improvements in the application, adaptation, and use of knitted fabrics.
214. Edward Collingwood and Thomas Collingwood, Rochdale—Certain improvements in machinery or apparatus for propelling vessels on water.
215. Adam Woodward, and William Carter Stafford Percy, Manchester—Improvements applicable to hoists and other apparatus or machinery for raising and lowering weights, designed as a provision against accidents, to which such apparatus or machinery is liable.
216. James Welch, Southall—Improvements in railway and other carriage brakes.
217. Sir Charles Shaw, Chapel-place, Cavendish-square—Improvements in constructing moveable or field batteries.
218. Samuel Williamson, Hanover-street, Cork—Improvements in the construction and mode of affixing street and other gas lamps or lanterns.
219. Samuel Dyer, Bristol—Improvements in the method of reefing, furling, and securing all the sails of ships or vessels.

Dated 6th February, 1858.

222. William Potts, Handsworth, Staffordshire—Improvements in painting upon glass, and in protecting paintings upon glass.
224. William White and Joseph Parlby, Great Marylebone-street—Improvements in the preparation or treatment of carton-pierre, papier maché, and such like plastic substances, and in the application of such matters to walls, ceilings, and other internal parts of buildings, berths, and other parts of ships and other vessels, carriages, and other structures.
225. William Ball, Rothwell, near Kettering, Northamptonshire—Improvements in the construction of ploughs.
226. John Miller, Upper George-street, Edgware-road—Improvements in machinery for the manufacture of bread. (A communication.)

Dated 8th February, 1858.

227. Robert Wilson, Liverpool—Improvements in propelling navigable vessels.
228. François Mathieu, Lawrence-lane—Improvements in stereoscopes.
229. Julius Decimus Tripe, Commercial road—Improvements in apparatus for securing window sashes or casements. (Partly a communication.)
230. Pierre Simon Meroux, St. Denis, France—Improvements in fire bars and grates for furnaces or other fire places.
231. Robert Cunningham, Paisley, Renfrew, N.B.—Improvements in or connected with the production of letter-press printing surfaces and surfaces used in reproducing ornamental patterns or devices by printing or otherwise.
232. Edward Dench, Chelsea—An improved boiler for heating water for heating and warming.
233. Richard William Johnson and William Stableford, Oldbury, Worcestershire—Improvements connected with the break levers of railway wagons.
234. William Edward Newton, 66, Chancery-lane—Improved machinery or apparatus for breaking stones, minerals, and other analogous substances. (A communication.)
235. Henry Ball, Birmingham—Improvements in repeating and other fire-arms, a portion of which improvements may be applied to ordnance.
236. Edward Reader and John Dewick, Finkhill-street, Nottingham—Improvements in lace machinery for the manufacture of velvet lace and looped fabrics, and in the fabrics manufactured by such machinery.

Dated 9th February, 1858.

237. Charles Askew, 27½, Charles-street, Hampstead-road, and David Ritchie, 42, William-street, Regent's park—Improvements in roasting machine for meat, poultry, or game of any kind, to be worked by spring jack movements, or by the ordinary smoke jack.
238. John Wells, Percival street, Clerkenwell—Improvements in watch cases.
239. William Brown and Charles Neale Day, Devizes—Improvements in sluice valves.
242. Evan Leigh, Manchester—Certain improvements in carding engines for carding cotton and other fibrous materials.
243. John Taylor, Swanton Novers, Thetford—An improvement in the construction of horse hoes, applicable also to drills.

WEEKLY LIST OF PATENTS SEALED.

February 19th.

3010. Julien d'Helle and Albert Viscount de Waresquiel

February 23rd.

2236. George Daniel Davis
2243. John Gedge
2248. Henry Parry
2251. John Jervis Tucker and George Blaxland
2252. Werner Staufen
2255. Philip Hill and John Moore
2256. John Gedge
2258. William Hargreaves
2268. Charles Thompson and James Thompson
2274. John Drumgoole Brady
2382. William Jenkins
2384. David Thorpe Lee
2404. Richard Brown
2406. Peter Armand le Comte de Fontainemoreau

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

February 15th.

361. John Oxley
374. Frederick Blacket Edward Beaumont

February 19th.

389. Paul Prince
390. Charles Low
398. William Hartcliffe and Joseph Waterhouse
409. Barnaby Angelo Murray
453. Thomas Sadleir

February 20th.

367. David Hulett
386. Frederic Prince